

AN  
ESSAY  
ON  
DISEASES  
INCIDENTAL TO  
LITERARY and SEDENTARY  
Persons.

WITH  
PROPER RULES FOR PREVENTING  
THEIR FATAL CONSEQUENCES,  
AND  
INSTRUCTIONS FOR THEIR CURE.

---

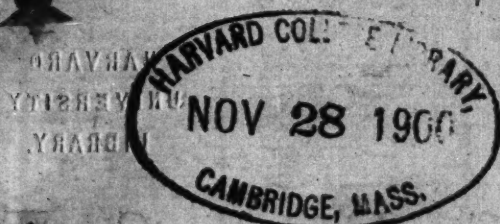
By S. A. TISSOT, M. D.

---

DUBLIN:  
PRINTED FOR JAMES WILLIAMS, AT No. 5, SKINNER-ROW.

MDCCLXXII.

V. 5880



Episcopal Theol. School Library



[ 88 ]

TO

THE CONSULS, QUÆSTORS,  
TRIBUNES, and other illustrious  
and great Men, of the senatorial Or-  
der at BERNE.

I AM indebted to you for many great obligations; most illustrious and great men; and lately you have done me the honor to confer a most noble and unexpected favor upon me. It is but just that I should, by Words, thank those to whom I am incapable of making any other return; and such a testimony of gratitude I will shew them as long as I live. It is proper, that, being publicly graced by your favors, I should make a public acknowledgement, and give some pledge of my gratitude, however mean and inadequate. Receive therefore, most illustrious and excellent men, and deign to receive favorably, this first, though feeble proof of my diligence in my new office. May the Almighty enable me to promote the public interest of the Academy, by more considerable and more valuable productions, and may the hopes which you have conceived of me, venerable fathers of your country, and the hopes which the people have conceived concerning this new professorship, be fulfilled to general satisfaction. May the

the propitious Deity likewise favour all your public and private undertakings, and shower all his choicest blessings both upon you and yours, and the whole Commonwealth. And cease not, reverend Fathers, to make happy, by your constant benevolence and favor, a man entirely devoted to the service of your excellencies.

A. TISSOT.

Lausanne,

April 29, 1766.

Adver-

## Advertisement to the Reader.

**T**HE occasion of this discourse, and the choice of the materials, will sufficiently appear from the discourse itself; therefore courteous reader, I shall not trespass upon thy patience by a long Preface.

I have long since read many treatises and dissertations concerning the health of the studious; but of all the authors, who have treated this subject, the only one who has acquitted himself to my satisfaction is BERNARD RAMAZINI: for I have not yet had an opportunity of reading the work of the celebrated PUJATUS, a man who in other respects has deserved highly of the medicinal science; but whose treatise upon this subject is, I find, neither praised by the journals nor by his friends. Nor is the work of RAMAZINI complete; since he has left more topics untouched than he has elucidated. I have therefore undertaken an important, an agreeable, and even a new subject; and I hope, I shall not appear unequal to it: but it will be sufficient to have pointed out the road at a distance to learned travellers; they will soon be able of themselves to shew the unknown paths; which is my earnest wish and desire. In this treatise, there will occur many passages transcribed verbatim from CELSUS, GAUBIUS, and other eminent men, and that even without distinguishing them by quotation. This plagiarism will, I hope, be excused, because I looked upon it as a sort of profanation, to alter their words, as they were extremely eloquent, and admirably adapted to my purpose: besides, it was improper to disgust the reader, by too great a number of quotations.





ON THE  
DISEASES  
OF

LITERARY and SEDENTARY Persons:

WHEN I consider with myself how many and how great men have formerly ascended this chair, with how general an applause they applied to the education of youth, and how every branch of erudition, has been cultivated to such advantage by the present set of teachers, into whose learned order I am this day admitted, by the great favour and indulgence of our senate; whilst I, at the same time, reflect how much this new situation differs from my former manner of living, in which, as I had willingly passed a considerable part of my life, I had determined to continue to my old age; when I reflect upon all these circumstances, a tremor seizes my limbs, and my voice falters. But because, from the very foundation of this respectable academy, custom, which governs all things, and your expectation requires it of me, emboldened by your kindness, I will make trial of my abilities.

Being a new member, and ascending a new chair, I propose to speak of the connexion between physick and other academical studies, and it was my design to explain what it borrows from them, and what it contributes to them in its turn.

It would be a pleasure to me, reverend pastors of the church, and illustrious professors of divinity, to declare aloud how much physick is indebted to religion; I would gladly vindicate the principles of physicians, from the imputations of ancient calumny, and prove that religion is strongly supported by a science, which, being totally conversant in the contemplation of an admirable creature, demonstrates, from the wonderful mechanism of a man in health, and the surprising cures of the sick, the existence and great wisdom of the Supreme Artificer; and that even to the most obstinate. Do men forget the Deity; Physicians stand forth, and theology is intirely revived; for who have spoken more truth, or in a sublimer stile concerning God, than they; there would be no end, were I to cite them all; but I must not pass over in silence HIPPOCRATES, the first who ever asserted that fate produced nothing, but that all those events, which we call fortuitous, are regulated by the will of God: the next to him is GALEN, who diffusively proves, that the existence of God is demonstrated by the position of the thumb alone; and calls his treatise concerning the use of the parts, a monument of the glory of the Deity: to him must be added POLYCHRESTUS, to whom the illustrious sir-name of *Lover of God* was given, on account of his great piety: BOYLE, who wrote excellent works himself, and founded an admirable institution for the promotion of religion, which he nobly endowed; his friend SYDENHAM; the immortal LÖCKE; HOFFMAN, who carried his piety so far, that he was not entirely free from superstition; the admirable TRALLÉS; and my dear and worthy friend HALLER, who in an excellent treatise has asserted the utility of religion in a manly stile, as usual, and exerts himself to the utmost to promote its cause.

Phy-



Physicians indeed laugh at the idle tales of old women; at the extravagancies of the vulgar, and thereby incur the censure of weak and superstitious people; they deride the inventions of imagination; and, whilst every divine lays down his own opinion as the rule of truth, physicians make a jest of the phantoms which these set up for religion, and refuse to embrace a cloud for a Juno: thence all these clamours, these accusations, these reproaches, and these calumnies. But if some of our society have in fact been led astray by error, which I am sorry to say cannot be denied, the severe censure of their colleagues has soon convinced the public how much they disapproved of their principles.

It would be a pleasure to me, most learned professor of morality, whom to address by the tender name of father-in-law is my greatest happiness; it would be a pleasure to me, I say, to treat to the best of my abilities of the connection between the knowledge of morals and of health; how near the relation is between them, how exact the concatenation in every respect. This is certainly both an agreeable and useful undertaking: nor is it altogether new; for HIPPOCRATES has, in his whole treatise concerning diet, done his utmost to prove, that souls are the same in all men, and that the various degrees of wisdom and folly proceed from the different temperament of their bodies; and GALEN, who has admirably demonstrated the power of the body over the mind and the motions of the will, desired the teachers of philosophy, sixteen ages ago, to send all persons of bad morals to him to be cured (a).

H 2

Should

(a) Now let those come to themselves who with difficulty admit, that the aliments are capable of rendering some more temperate, others more dissolute, some incontinent, some frugal, confident, timorous, mild, modest, or quarrelsome; let them come to me and hear what it would be proper for them to eat, and what to drink. They will find from hence a great assistance in moral philosophy; they will likewise find from hence a great accession to their intellectual faculties; they will become more ingenious, have better memories, and be more studious and wise. For besides the proper  
sort

Should I be ever so full, most learned professor of jurisprudence, I could not entirely display the connexion between us; for whether a legislator regulates a commonwealth, or whether a judge upon the bench weighs questions of civil law, or criminal and ecclesiastical causes, in the balance of Themis, there occur cases, and those not a few, in which he cannot do without the assistance of our art.

It would be necessary to lay open the greatest part of natural knowledge, most profound professor of philosophy, were I treat of all that it has in common with physic; for you well know that both the cure of diseases, and the contemplation of the nature of things, had their beginnings from the same authors. We are therefore informed that many of the professors of natural philosophy were well skilled in physic, and that the most illustrious of these were PYTHAGORAS, EMPEDOCLES, and DEMOCRITUS. HIPOCRATES was the first who separated these studies; but he did not separate them in such a manner as to pull them asunder entirely, but so as to split that comprehensive science into several more minutes members, that many might cultivate divided, what one could not learn entire; but that neither should desert what nature made inseparable.

That part of this science, which considers body merely as body, has retained the name of natural philosophy: others went by various names, according to the different sorts of bodies of which they treated. The human body is the object of physic, which without natural philosophy is lame; for he is but a dunce in the art of healing, who is not acquainted with the forces of bodies, and the laws of motion: nor do professors of physic  
care

sort of food and liquors, I will instruct them in the nature of air and climates, and point out to them what countries they should chuse to reside in, what they should avoid. The book which proves that manners are influenced by bodily constitutions, Cap. 9<sup>o</sup>. Charterius, t. 5. p. 457. Observations of the like nature are to be found in HIPOCRATES, ARISTOTLE, and PLATO.

care to undertake the education of those, who are ignorant of natural philosophy. But if physic is greatly indebted to this science, it can in some respects return the favour, and physicians have returned it in many instances: for GILBERT, who first satisfactorily explained the phænomena of electricity, was a physician, as was likewise BOYLE, who promoted natural knowledge more than any other philosopher; and BOERHAAVE, whose experiments upon the elements have given a new face to this science; and, to pass over many others in silence, the illustrious MUSCHENBROEK, who is universally allowed to surpass all others in this article.

And there is some connexion, though perhaps, not so close, between your studies and physic, illustrious professors of history and languages; for what physician would not be ashamed to be ignorant of history and the humanities; who would not be desirous of consulting the Arabian physicians in the originals, as none of them has hitherto been faithfully translated? Are there not likewise certain parts of history, which physic alone can throw proper lights upon? Is not CELSUS a physician, whose works, all that are desirous of speaking Latin in perfection, study night and day? PLINY, in whom we meet not merely with helps for acquiring the Latin language, but with the purest Latinity, though he did not practise physic, understood it perfectly, and is entirely taken up in explaining it. ARETEUS, whom we respect as a master of the healing art, is conspicuous for the elegance of his Greek. GALEN has an eloquence peculiar to himself. So has ALEXANDER. And those, who cultivate the Arabic Language, boast that it is no where to be found in greater purity than in the writings of physicians.

It appeared to me at first sight, that on so copious a subject, it would be easy to make an oration; but upon maturer deliberation, I began to think quite otherwise; and so, having laid down a burthen too heavy for my shoulders, and left it to more sublime geniuses, I kept



to my practice, *my labour is here engaged, and not my eloquence*; and having resigned the hopes of declaiming like an able orator, or soothing your ears with the allurements of words, I have chosen this subject, as capable of pleasing you by its own force; and as it is sufficient barely to lay it before you, it requires no ornaments.

*De tauris dicit arator, navita de ventis.*

*Quod medicorum est promittunt medici.*

*The plowman talks of oxen, the sailor of the wind.*

*Physicians offer what belongs to their profession.*

And addressing myself to learned men as a physician, I shall treat of the health of studious men; and here again I must request your indulgence;

*Dira per incautum serpunt contagia vulgus.*

*A dire contagion through the vulgar spreads.*

But whilst I was hurried about to attend a crowd of patients, I had no leisure to polish my work; therefore I have, without method, thrown together my thoughts and observations on this useful topic.

It is an old complaint, that study, though essentially necessary to the mind, is hurtful to the body; and Celsus has intimated the necessity of a remedy. Those that are of weak constitutions, says he, as most studious men are, should take greater care than others, that what is impaired by application to their studies may be repaired by attention to their constitutions. And Plutarch an admirable judge of what is right and becoming, declares it to be a shame, that the learned should spend days and nights in useless investigations, and at the same time neglect the art of preserving their health; being, doubtless, ignorant that the healing science was formerly looked upon as a part of wisdom, and that those chiefly required medical assistance, who have impaired their bodily strength by anxious thought and watchfulness.

There

There are two principal sources, from whence all the sufferings of the studious flow; the constant exercise and application of the mind, and the continual rest of the body; for they are as indolent in body, as they are busy and active in mind. By enumerating the ills, that arise from both causes, a dreadful crop of diseases will be displayed.

Let metaphysicians bewilder themselves in inquiries, how the mind governs the body, and is governed by the latter in its turn; physicians, descending to considerations of less importance, but of greater certainty, perhaps, and little solicitous about the causes of this mutual government, and but confining their inquiries to phænomena, know by experience, that certain emotions of the mind necessarily arise from certain conditions of the body, and that by particular emotions in the mind particular changes are unavoidably produced in the body, and that whilst the mind thinks, some part of the brain is stretched. We make no other inquiry; it would be of no use to know any thing farther.

So close is the connexion between mind and body, that we cannot well conceive the operations of the one independent of some correspondence with the other. For as the senses are incapable of conveying the materials of thought to the soul, without the motion both of their own fibres and those of the brain, so, whilst the mind revolves these cogitations, the organs of the brain are more or less stimulated to act, stretched, and have oscillatory motions excited in them. The mind agitates the machine; and these are the labours of the medullary part, which being so tender, does not suffer the less by these motions; and every man easily feels that in himself, which the strongest arms experience after the most violent exercise.

For which of you, that has been addicted to a studious life, has not often found, after intense thought, that the innermost part of the brain has been affected by a troublesome heat, and intense pain, such as the muscles feel when fatigued with long labour? Nor does

the medullary part of the brain suffer alone, but the very eyes themselves can perceive the force of the thinking soul, extended beyond the brain : for whilst we look upon a man that meditates seriously, all the muscles of his face appear stretched, nay sometimes convulsed. Nor does the brain, the medulla of which is the source of the nerves, suffer alone, but they themselves are hurt ; and PLATO has admirably shewn, in the masculine style in which he so greatly excelled, how much the exercise of the mind prejudices the body. “ Quando anima  
 “ inquit, corpore admodum potentior est, exultatque  
 “ in eo atque effertur, totum ipsum intrinsecus quat-  
 “ ens languoribus implet. Quando etiam ad dicendum,  
 “ investigandumque, collectis in unum viribus, vehe-  
 “ menter incumbit, liquefacit prorsus corpus, & labe-  
 “ factat ; denique cum ad dicendum, differendumque  
 “ privatim & publice ambitiosa quadam concertatione  
 “ contendit, inflammat corpus atque resolvit. Tam  
 “ arcta enim lege confortii, sic RAMAZZINI, foede-  
 “ rantur anima & corpus ut omnia tam bona quam  
 “ mala unius in alterum vicissim corrivent, ac veluti,  
 “ ex corporis nimia exercitatione, anima ad mentis  
 “ functiones languescit, ac torpet, sic ob nimiam ani-  
 “ mæ contentionem, circa sapientiæ studium, corpus  
 “ marcescat necesse est, absumptis nempe spiritibus,  
 “ communi scilicet instrumento ad materiales & spiritua-  
 “ les operationes rite obeundas.” “ As the mind, says  
 “ he, is far more powerful than the body, and exults  
 “ and is elate therein, it affects it inwardly, and fills it  
 “ intirely with languor ; and when, by gathering toge-  
 “ ther its strength, it applies earnestly to learning and  
 “ to the investigating of things, it quite dissolves and  
 “ unhinges the body : finally, when with an ambitious  
 “ emulation it exerts itself to speak and harangue both  
 “ in private and public, it inflames the body and relax-  
 “ es it. For, as RAMAZZINI observes, the soul and  
 “ body are united by so firm a league, that all the ad-  
 “ vantages and disadvantages of the one must affect  
 “ the other ; and as the soul is rendered languid in the  
 “ mental



“ mental functions, and becomes stupified in the same manner, by the too great application of the mind to the study of wisdom, the body must unavoidably, pine away, the animal spirits being consumed, which are the only instruments of rightly performing both material and spiritual operations (b).” These are indeed observations highly just. For he who is not ignorant what a multitude of nerves there are in the animal system, who is sensible that there is no function that can be performed without them, will easily apprehend that by the fatigue of the medulla a languor may be brought upon all the nerves, so that the several functions may be weakened, and the strength of the body may, without its being exercised, be totally exhausted.

It is universally known that there are books composed without any strength of genius, which appear quite insipid and uninteresting to the reader, and only tire the eyes; but those that are composed with an exquisite force of ideas, and with an exact connexion of thought elevate the soul, and fatigue it with the very pleasure, which, the more compleat, lasting, and frequent it is, breaks the man the more (c).

MALEBRANCHE was seized with dreadful palpitations in reading DESCARTES' Man; and there is still living at Paris a professor of rhetoric, who fainted away whilst he was perusing some of the sublime passages of HOMER (d).

The head itself, and the nerves, and the stomach which is fuller of nerves than any other part, first suffer for the errors of the mind.

An eminent person, who had impaired his health by too intense an application to study, was immediately seized

(b) Plato's works, p. 648.

(c) 'Tis an admirable observation of MONTESQUIEU: All things fatigue us at last, and above all great pleasures; the fibres, that were the organs of it, stand in need of rest: we must employ others better adapted to serve us, and thus as it were, divide our labour. *Essay upon taste.*

(d) LORRY upon melancholy and melancholy disorders. Tom. I.

seized by a terrible vertigo, if he happened to listen attentively to a person telling a story. He likewise complained, that nothing could give him greater uneasiness than his attempting to recal the memory of any thing, for then he was put to the greatest pain imaginable, and sometimes seized with a fainting fit, attended with a sense of extreme lassitude. Nor could he desist from his effort after he had once begun it, though he laboured ever so much for that purpose; but was under a necessity of proceeding as he had begun, till he fainted away (e). The illustrious VIRIDET, formerly my fellow-citizen, knew a woman who, whenever she used any application of mind, was seized with a severe fit of the colic (f). And a late author speaks of a man who never thought intensely, or experienced any lively sensation, or was put in a passion, but his whole arm immediatly swelled up (g). Both of which cases may be explained by the defect of the nerves alone, and the action of the mind upon the nerves.

Daily observation proves the force of the mind's action upon the stomach; and this, every man has an opportunity of experiencing in himself; for the more intensely any man thinks, and the more strongly he exerts the reflecting powers of the mind, his more slowly and with the greater difficulty, *ceteris paribus*, does he digest what he eats; and, on the other hand, the freer a man's mind is from reflexion, the more readily and the better he digests. It is observable, that fools always eat and drink a great deal, and yet digest perfectly well, even though they lead a sedentary life, and do not surpass others either in the bulk or strength of their bodies: whilst men of genius and abilities, though they have strong muscles, and take exercise sufficient, are obnoxious to crudities in the stomach and slowness of concoction.

(e) VAN SWIETEN'S Comment. in BOERHAVII aphor. Tom. III. p. 413.

(f) Traité du bon chyle, tom. II. p. 647.

(g) Th. BORDEUX, prix de l'academie de chir. tom. VI. p. 199.

coction (b). BOERHAAVE, who resided a long time in a city renowned for learning, has observed, that studies excite a disagreeable sensation at the upper orifice of the stomach; and that, if this be neglected by the studious, madness ensues (i). My illustrious friend POME knew a man of learning, who had made his stomach so infirm by intense application, that immediately after eating he vomited (k). I myself have seen some, who, when their minds were wearied out with constant study, being taken ill, at first lost all appetite, then were seized with a weakness of their whole bodies, and at last with dreadful paroxysms, which began with vomiting, and ended in convulsions and a total privation of their senses.

Soon, by an unavoidable fatality, the disorder that had affected the body, recoils upon the mind; for the Author of nature has ordained, that most of the operations of the latter, should stand in need of the assistance of the former; which has given occasion to the following just observation of PLINY the younger (l), and long before him, it was observed by DEMOCRITUS, that the mind is supported by what supports the body. "Augescit mens cum adest sanitas, adeoque huic ut proficiant, qui recte sentiant consentaneum est: ubi vero corporis habitus dolet nec mens ad virtutis meditationem est alacris." "The mind acquires new vigour whilst the body is in health; therefore all those who think justly, will take care of the latter: but when the body is in a painful state, the mind is less alert in the meditation of virtue (m)." Should it then seem surprising, if, when the tenor of the brain and nerves is broken by the efforts of the mind, the latter should decline in its turn? First of all, it is deprived of its fortitude;

(b) Conf. FLEMING Neuropathia, præf.

(i) De morbis nervorum, p. 456.

(k) Traité des vapeurs hystériques, p. 248.

(l) Epistol. lib. 2. ep. 9.

(m) Epistol. ad HIPPOCHATEM. Hipp. Fæli. tom. II. p. 1288.



titude; distrust, terror, and melancholy, seize upon it; and he who would have stood undaunted amidst a falling world, a few months before, is every moment filled with terror and consternation, as soon as his nerves are affected by a hypochondriac disorder. Relentless tyrants may have condemned to death philosophers whom they hated; but it never was in their power to subject them to the dread of death, which they had long shaken off. O how much more cruel would they have been, if they had granted them their lives, and had it in their power to torment their minds with hypochondriacal terrors!

Thus rendered unequal to the task of study, the learned are at last under a necessity of quitting their beloved pursuits; for, as the strength of their nerves diminishes, their attention fails, the memory begins to lose its tenaciousness, the ideas are obscured, and an uneasy sensation of heat over the whole head, a dreadful palpitation, the most extraordinary weakness, and a groundless fear of approaching death, oblige them to discontinue their application. Their strength being at last repaired by rest, nourishing aliments, and exercise, they renew their assiduity in study, but are soon obliged to quit their books as before. Thus the whole day is lost; and when evening approaches, and they retire to bed, their weakness and anxiety make them pass their nights most dismally, whilst the great mobility of their nerves prevents their sleeping, and sometimes increases to such a degree as totally to deprive them of the power of thinking. I know a young man, upon whom an intense application to study had this extraordinary effect, that, if he read even a few pages, he was torn with convulsions of the muscles of the head and face, which assumed the appearance of ropes stretched very tight.

Nor does too intense an application produce only slight and transient convulsions of the muscles; it likewise renews and generates the most dreadful nervous disorders. GALEN (n) mentions a grammarian, who was

(n) De locis affectis, lib. 5. cap. 6. Charter. tom. VII. p. 492.

was seized with a fit of the epilepsy, whenever he meditated profoundly, or taught with vehemence. I myself have seen instances of it. And the illustrious VAN SWIETEN laments the case of youths of the brightest hopes, who have been seized with a dreadful and incurable epilepsy, upon being compelled by severe masters to apply to their studies with scarce any intervals of relaxation. HOFFMAN (o) makes mention of a young man, who, as often as he wearied out his memory and his genius, by attentive study, was seized with the momentary epilepsy, a palpitation of the heart, and a trance; but when he remitted of his assiduity, was always tolerably well. This the celebrated PETRARCH likewise unhappily experienced, being seized with an epilepsy through his great application to study, to which he was immoderately attached. In a public promotion, one of the candidates for literary honour, after having pursued his studies with the most arduous application both day and night, through a great attention to his oration, that he might be able to say it accurately by heart, was suddenly seized with a catalepsy, and fell down (p).

The labour of the mind not only produces nervous disorders, but, by means of the nerves, gives rise to other complaints. An eminent mathematician, who was troubled with an hereditary gout, and had always lived soberly and chaste, hastened a paroxysm by applying a long time to the solution of a difficult problem (q). And the case of the chevalier DE PERNAY is very extraordinary. After four months of the closest study imaginable, without any previous disorder, his beard fell first, then his eye-lashes, then his eye-brows, then the hair of his head, and finally, all the hair of his body (r). Did this proceed from the great relaxation of the roots, from which the hairs grow; or from the want of nutri-

on ?

(o) *Medicin. ration. de epilepsia.* §. 19.

(p) *Felic. PLATERI observat.* p. 28.

(q) *VAN SWIETEN, tom. IV. p. 305.*

(r) *Gazette de France, Fevr. 25, 1763.*

on? Certain it is, that an intense application of mind relaxes the whole corporeal frame, and prevents all nutrition, for two reasons; for this is the effect of thought, not upon all, but upon most constitutions; that it accelerates the pulse, and produces a fever, which, by dissolving the nourishing jelly of the fluids, occasions paleness, leanness, consumption, and a sort of wasting of the nerves: on the other hand, the cessation of the action of the nerves, is capable of producing it. Nor does it less cease in the whole body, whilst it is obstructed by application of mind, than when it is stopped by a swelling, or a ligature in any part. We should not be too inquisitive in prying into causes; and many circumstances relating to nervous disorders will for ever remain unknown: but if any one should be curious to know how the too great tension of the nerves is hurtful, I will briefly give him my sense of the matter. The body is exhausted by too great an evacuation; hence arises weakness, an extraordinary tenuity of the humours, and, what it is generally productive of, a diseased mobility. Suppose the blood were to run copiously from a wound, or the gastric fluids were to be poured forth by the anus, or the breasts sucked too long, or a greater discharge of saliva made by spitting, or the wretched body were to be troubled with a long diabetes, or in short, any other evacuations were too much increased, the strength would decline, and the health be lost; but whilst the nerves act, their fluid runs out of the body, and carries off the strength with it; nor is there any thing in the body either more laboured, more necessary in many animal functions, or more intimately connected with strength. In studious men, therefore, a perpetual dissipation of the nervous fluid springs from the incessant action of the nerves, attended with weakness, and an extraordinary mobility, from whence all the above-mentioned diseases easily take rise; these are very dreadful, but diseases still more dreadful remain to be described.

It is not easy for the mind not to throw out at will, such motions as it has powerfully conceived; and this is  
a second



a second cause of the diseases of studious men, from whence spring so many errors and wanderings of the mind, to be changed for death only, so many phrenzies and deliriums : for whilst ideas no longer answer to their external objects, but to the internal disposition of the brain, the latter being agitated by its own motion, either entirely, or in part, is unable to receive new vibrations, to be transmitted, all, or some, by the senses ; whereas those that are spontaneous, cannot be checked.

The brain of BLAISE PASCHAL was so vitiated by passing his life in the laborious exercises of study, thought, and imagination, that certain fibres, agitated by incessant motion, made him perpetually feel a sensation, which seemed to be excited by a globe of fire being placed on one side of him ; and his reason being overpowered by the disorder of his nerves, he could scarce banish the idea of the fiery globe being actually present. SPINELLO painted the devils thrown from Heaven by the Almighty, and gave so fierce a countenance to Lucifer, that he was struck with horror himself ; and during the remainder of his life, his imagination was continually haunted with the figure of that demon, upbraiding him with having made so shocking a portrait of him. There are many others, whom the force of genius too much roused, has for ever hurried beyond the boundaries of truth. GASPAR BARLAEUS, who was at once an orator, a poet, and a physician, was not ignorant of this danger, concerning which he admonished his friend CONSTANTIUS HUYGENS (1) ; but being blind with regard to himself, he, by immoderate studies, so broke the force of his sensorium, that he thought his body was made of butter, and carefully shunned the fire, lest it should melt him, till being at last tired of his excruciating fears, he leapt into a well. I must still grieve for a friend,

(1) Epistol. L. 2. ep. 40. Neither write back to me in prose or in verse, lest you should bring your health, which is not yet confirmed, into new danger, for the spirits will be easily warmed by attention : hence blood, hence the habit of body.

friend, of a penetrating genius, an excellent understanding, of strict morals, and one that seemed born for a better fate; who being animated with too great a love of learning, and in particular of the medical science, by reading night and day, observing, making experiments, and meditating, at first became sleepless; then began to talk, sometimes incoherently, and sometimes rationally; at last run mad, and having scarcely escaped with life, never recovered his reason. I have known many others, who by study alone, were first rendered phrantic, or crazy, and at length became idiots. I love, esteem, and honour an illustrious man, and a man of extraordinary abilities, who being twelve hours intent upon settling a difficult memorial, after having finished his work, became delirious, till a soft sleep quieted the state of his nerves. Observers give us accounts of many similar cases, and I was informed by a witness, who may be confided in, that PETER JURIEU who was formerly famous for his talent at disputing, by his labours in writing books of controversy, and expounding the apocalypse, so disordered his brain, that though he thought like a man of sense in other respects, he was firmly persuaded that the seven fits of the cholic, with which he was tormented, had been occasioned by a constant fight between seven horsemen that were shut up in his bowels. There have been many instances of persons, who thought themselves metamorphosed into lanterns, and who complained of having lost their thighs.

But those are affected in the most dangerous manner, who dwell too long upon one and the same thought; for thus one part of the sensorium being longer stretched than the rest, without being ever relieved by the others in their turn, is the sooner broke; for as the body suffers more if one or but a few muscles alone act, so the brain is the less fatigued when various parts act successively; the part which discontinues recovers its strength, whilst the others are at work; and that is durable which does not want alternate rest.

Many

Many years ago I knew a woman, who appeared to have very good sense for five and twenty years; but having, unhappily for her, embraced the sect of the Herren-hutters, she became entirely inflamed by the love of our blessed Saviour, and of him alone; and she dwelling entirely upon this idea both day and night, it so broke the tone of her brain, that in a few months time she became an idiot; but still she was so mindful of her Lamb, that visiting her every day for half a year together, and frequently addressing my discourse to her, I could never hear any other words from her than my *sweet Lamb*; and this she uttered every half hour, with downcast eyes, and was the only word she spoke for a year and a half; which time being elapsed, she pined away and died. And to pass by other examples, there was not long ago in this academy, a young man of bright hopes, who being too earnestly solicitous about squaring the circle, died mad in the Paris hospital.

The third cause of the disorders of the brain, is, that law to which the human machine is subjected; that a new quantity of blood should be added to the part that acts. The illustrious MORGAGNI knew a man of learning at Boulogne, who, whenever he gave his mind to abstract meditations in the morning, before he rose, was sure to bleed at the nose for a short time after (1). Therefore as often as the brain increases its action, it is moistened with an additional quantity of blood, which, giving a new tension and a quicker motion to the vessels, brings on both the sense of pain and heat already mentioned, and many more grievous symptoms; namely, according to the different state of the brain, of the blood, and external objects, it occasions dilatations of the veins and arteries, obstructions of the nerves, inflammations, suppurations, scirrhus tumours, ulcers, dropsies, and thence head-achs, deliriums, drowfiness, convulsions, lethargy, apoplexy, and continual obstinate watchings, which cruelly torment the studious, and afflict them

I

with

(1) De sedibus & causis morborum. ep. 3. § 13.



With new diseases ; for what diseases, what perturbations of the mind do not protracted watchings give rise to ? The great BOERHAAVE was six weeks without sleep, after profound study and meditation ; and at the same so indifferent to every thing, that scarce any object whatever affected him (u). And which of you, learned auditors, has not found by experience, that a slight and disturbed sleep, a sleep that scarce gives refreshment, generally follows a day past in study. A slight irritation of the brain causes want of sleep ; from one more considerable arise convulsions and drowsiness ; from the greatest of all, a mortal apoplexy, which disorder often puts an end to the lives of learned men. The reason is, that that part suffers which was guilty of the excess, and whilst the strength of the brain is relaxed by study, and fresh blood is forced into it, it must sooner or later be quite over-whelmed, especially at the time that some new cause adds force to the blood that impels it ; thence it has frequently come to pass, that learned divines in preaching, and learned professors in delivering their lectures, or disputing as was the case with the celebrated CURTIUS at Leipzig, expired on their very chairs ; and LIVY the historian has preserved to us the history of king ATTALUS, who died in the assembly at Thebes, whilst he was animating the Boeotians by an harangue to enter into an alliance with the Romans.

I saw a reverend pastor, who on Whitsunday, after having preached long and with vehemence, whilst he was distributing the host to the people, was first seized with trembling, then stammered, then was delirious, then fell down in an apoplectic fit, and continuing delirious ever after, though in an advanced age, lived for some months in a state of infancy. The celebrated MORGAGNI likewise mentions a preaching monk, who was seized with a violent apoplexy before his congregation, and quickly died ; his vehemency of delivery conspiring

springing with a plethora to destroy him (x): A professor at Berne, deeply versed in the oriental languages, a man in the prime of life, but of indefatigable industry, not long since sunk into a second infancy, and a state of idiotism, his brain being overflowed by water, which stagnated in it (y).

We must not forget, in enumerating the injuries suffered by the brain from this overflowing of the blood, that the disorder of the nerves which causes the hypochondriac disposition, is increased; their little tubes being dilated and are constantly weakened, grow soft, and make less resistance to impressions, which is one of the chief causes of the hypochondriac disorder.

Nor do the sufferings of the studious men end here, since from another law, which holds equally in the animal œconomy, a fourth cause of the disorders of the learned springs from an over violent labour of the mind; for the animal fibre is indurated by being used, the whole machine grows callous as it grows old; the parts that are exercised by labour become hardened in workmen; the brain of studious men contracts a callosity, so that becoming unequal to the task of forming ideas, they fall into a premature dotage; thus the too great softness of an infant's brain, and the too great hardness of a brain occasioned by study, are equally ill adapted to produce those vibrations, without which the force of thought is lost. Let the fibre be moistened with water, or stiffened with lime and sand, it in both cases becomes equally incapable of performing its function. At first the memory is impaired, as GALEN justly observes, and then reason itself is disturbed (z).

Nor is there any necessity that the mind should meditate great and sublime objects, to impair the strength of the nervous system; a too protracted use of the eyes has often given rise to innumerable nervous disorders; concerning which, the testimony of GUNZIUS is of the utmost

I 2

(x) De sedib. & caus. ep. 3. §. 17.

(y) HALLERI Element. Physiologiae, t. 4. p. 317.

(z) De locis affectis, l. 3. c. 5.

utmost authority (a). And every weak man must know by experience, how much too great a use of the eyes weakens the head. Of this I have already given an example, and have often found it by experience; for when I contemplate any object a considerable time, after the fit of a fever, or any other disorder, and before my health is quite recovered, I am seized with a vertigo, a sickness in the stomach, and a disagreeable listlessness of the whole body.

In order to vindicate literature from the charge brought against it, you will doubtless object, that many men of profound learning have lived to the most advanced age, and retained their powers both of mind and body unimpaired to the last. I have heard of many, I have myself seen more; nor can either you or I ever forget that truly illustrious man, that man of universal learning, who, as he was worthy of it, enjoyed general love and veneration; who was the ornament, honour, and delight of this academy for above fifty years, and whom we all with equal wonder and satisfaction saw enter upon his 90th year without either his reason, or his senses being in the least impaired. But all are not equally happy, and there are few men indued with such strength, both of mind and body, as to undergo such labours with impunity, if even those can be said to undergo them with impunity, who attain to that stage of life, which they perhaps would have greatly exceeded, had they lived in a different manner. Some men are by nature insatiable in drinking wine, others are born cormorants of books, and never glutted with the acquisition of learning: nor should it be passed over in silence, that almost all the learned men, who are looked upon as its masters by the human species, all lived to a great age; as HOMER, DEMOCRITUS, PARMENIDES, HIPPOCRATES, PLATO, PLUTARCH, LORD BACON, GALLIÆO, HARVEY, WALLIS, BOYLE, LOCKE, LEIBNITZ, NEWTON, BOERHAAVE.

Can

(a) Ad libellum HIPPOCRATIS de humor. p. 211.



Can it then justly be infered that violent exercises of the mind are not hurtful ? Take care how you draw so false a conclusion ? But, as I said a while ago, some men are born with happy constitutions for meditation, and perhaps that excellent constitution of the fibres, productive of longevity, is the same that produces great geniuses ;

*Mens sana in corpore sano.*

*A sound mind in a healthy body.*

and consequently the great men, whom I have just mentioned, owed their reputation more to their extraordinary genius, than to industry and application ; and prevented the ill effects of their severer studies, by allowing themselves intervals of leisure, by taking proper exercise, and by the dissipation both of business and amusement. Nor did they lead the life of abstracted students, a species of men little known to the ancients, and who took their rise first at the declension of literature, were renewed at its revival, and may be properly compared to the Indian fakirs ; for both bid farewell to the human race, and both of their own accord, and generally without any emolument to society, emaciate and inflict austerities upon themselves ; the former by the sun, by cold, by nails, by chains, by whips ; the latter by books, manuscripts, coins, monuments, and almost all by inaction, and the want of bodily exercise. This is another, and a most prolific source of the disorders which afflict men addicted to study ; for the human machine was formed and intended for action by the supreme artificer ; therefore health is inseparable from action, which will be easily conceived by whoever examines the human body with attention.

It consists of containing and moving vessels, contained and moved fluids : if the fibres or vessels have a proper tone, if the fluids have a proper consistence, if the motions, by which they should be continually agitated, are neither too violent, nor deficient, we enjoy a good state of health. But it should be taken into consideration,

on, that motion is here the chief agent, for, that alone being changed, the whole state of the solids and fluids is changed likewise: if it be increased, the solids grow harder, and the fluids are compressed; if it be diminished, the fibre becomes relaxed, the density of the blood is lessened, for the whole body is formed of a chyle, which is softer and lighter than any part of the body, either solid or fluid, whose small particles a continual motion unites and strongly compresses; and if this motion should fail, the parts must prove deficient in their due firmness.

But the heart is the source of all the motions in the animal machine, the principle which puts the whole mass of fluids in motion, but is not alone sufficient for that purpose; wherefore nature has given it many helps, which never discontinue or remit, but the circulation becomes slower, and diseases arise from the motion of the fluids being retarded. The chief of these helps is the muscular motion, whose extraordinary force in quickening the circulation, the most ignorant surgeon every day displays to the eyes of all spectators, by an easy experiment, when upon opening a vein he bids the patient move some cylindrical instrument round about in his hand, in order to accelerate the emission of the blood: nay, every man may easily perceive in himself, how much the quickness of the pulse is increased by the motion of the body; and these are the effects of motion, it sharpens the appetite, it strengthens the fibres, keeps up a due temperature of the fluids, promotes all the excretions, fortifies the mind, and gives a pleasing sensation to the whole nervous system; whereas by too great sloth, the muscular strength is first destroyed for want of practice; and from a neglect of exercise there springs an impotence of motion: the circulation which is carried on only by the strength of the heart and the vessels, and destitute of external helps, first languishes in the most minute vessels, and then in every part of the body; the heat decreases, the humours stagnate, and contract a vitious disposition; for some of them lose part of their density,

density, others part of their tenuity, and they all become glutinous, and of consequence unfit for secretions; therefore what should be secreted is retained, the body is loaded with a mass of adventitious humours, it is destroyed by their acrimony, the vigour of life is benumbed, the strength declines, the blood is dissolved to water; hence arises a dropsy, a disorder in a manner epidemical to men of learning, by which the brain is often affected. An instance of this I lately saw with concern, in an eminent man, whose case I discovered too late, and who not by literary pursuits, but other exercises of the mind and total inaction of body, had broke a constitution which was once robust (*b*).

Those parts suffer the most, which having but weak solids, they want external helps more than any others; hence those organs are most affected by inaction, which, being contained in the abdomen, perform the first digestion of the aliments: the strength of the stomach is diminished, the nature of the gastric fluid is changed, the aliments make a longer stay in it, and not being sufficiently subdued by the animal force, they go through their spontaneous changes which they would have undergone out of the body. Most vegetables retain their tartness, which, by vellicating the nerves, occasions pains and convulsions; acid eructations arise, the cardia suffers pain, the throat is parched, and the teeth blunted. On the contrary, both flesh and eggs rot, and fat aliments grow rank: hence proceed putrid eructations, immoderate thirst, and continual fluxes; digestion is

I 4

always

(*b*) In studious men, who lead a sedentary life, whilst they grow pale with poring over books, an apoplexy often arises from such a cause; but it comes on slowly and gradually. For the first symptom is languor, and a love of indolence; then the understanding begins to grow dull, the memory to flag; they become sleepy, stupid, and often continue a long time in that state before their death. I have seen, and not without the greatest compassion, men of the most profound learning, and who had deserved highly of the republic of letters, who, as it were, survived themselves above a twelvemonth in a state of total oblivion, and at last died of apoplexy. VAN SWIETEN, tom. III. p. 263.



always difficult, troublesome and malignant; the aliments cease to afford nourishment, nor do they any longer repair, but irritate and weaken.

The exhaling vessels no longer pour forth a dewy mild, and saponaceous lymph, but they throw out a thick glue, which affects the sick with a constant pain and sense of a heavy weight, and of cold at the stomach, and creates the utmost loathing. The consequence is the same when the intestines, being of the same structure with the stomach, suffer the same injuries: the action of respiration first begins to fail, whose alternate compressions, whilst it is accelerated by the muscular motion, compress and strain all the viscera of the abdomen; their irritability is lost, the body is generally costive; there is here likewise accumulated, a troublesome phlegm, the prolific mother of diseases. Thus it once happened to the celebrated JUSTUS LIPSIUS, professor of history at Leyden, who being long ill, and under the care of his illustrious colleague and friend HEURNIUS, found no relief till he had voided a substance resembling the intestines, both in figure and colour; it was a tough and viscid phlegm, gradually collected in the whole tube of the intestines, through a sedentary life wasted by study; and this phlegm turning to putrefaction, made a jakes of the whole body. The fomes of the disease being thus purged off, he was restored to health (c).

The collected excrements compress with their bulk, the neighbouring parts, irritate the intestines by their corruption, and by absorbing the putrid matter infect the whole mass of blood. From all these causes put together, arise those excruciating pains in the bowels, which often torment the studious, and are with difficulty cured, as they are perpetually renewed by errors in diet (d). Hence that troublesome flatulency, so hurtful

(c) ADAM vitæ medicorum, p. 372.

(d) We meet in the medicinal diary with an account, very well worth reading, of a severe colic, attended with other bad symptoms, and occasioned by intense study and nocturnal lucubrations. Tom. I. p. 352.

ful to sedentary men, which torments the learned a thousand different ways, and often passes for other disorders.

The intestines are not only affected, but the functions of the neighbouring parts are disturbed, as well from the violence of the compression as from their own diseases; the pancreatic juice grows vapid and stale, the functions of the spleen are vitiated, the repositories of the bile are much disturbed; by its stagnation it loads the liver, forms obstructions in it, thickens and grows hard itself, and flows slowly to the intestines; whence their disorders, especially those of the jejunum, and vices of the chyle increase; being scarce able to pass through the narrow neck of the cystic duct, it often concretes into a stone, and occasions those severe colics with which the celebrated IGNA TIUS, founder of the Jesuits, was formerly afflicted, and with which the learned are often tormented (e). If at length by stagnating it putrifies, it then erodes, ulcerates, inflames, and assumes the appearance of all the innumerable disorders of the liver, and produces inconceivable anxieties. These are likewise caused, though with less danger, by that cruel disease called the hypochondriac; the first species of which, mentioned above, and called the nervous, is occasioned by excessive labour of the mind; the other, I mean the abdominal species, arises from a disturbed circulation in the abdomen. With both these disorders the learned are afflicted, and therefore seldom or never live free from this evil; and, whilst one of these adds force to another, they are seldom entirely cured of them (f).

Considering they occur so frequently, it is hardly necessary to give examples; but if I were to cite examples, the first that would occur to my mind would be that of

(e) VAN SWIETEN, tom. III. p. 187. ex COLUMBO.

(f) Experience shews us that men of learning, though naturally of a chearful disposition, become at last fixed, silent, pale, emaciated, and strangely troubled with the hypochondriac disorder, which generally tyrannizes over sedentary people. Ant. FELICI dissertatione epistolari, p. 203.

the illustrious SWAMMERDAM, that sagacious inquirer into nature, who was so full of atrabiliary humours, that he scarce vouchsafed to answer those who spoke to him, but looked upon them with an unaltered countenance; and when he took his seat as professor, sat with a face of astonishment, and made no answer to the objections of his opponents. Finally, having, before his death, wasted away with a phrantic melancholy, he burned all the manuscripts he had by him in a fit of madness: being reduced in apperance to a skeleton and the mere figure of a man (g), he died at length of a consumption.

It has indeed been observed, that this species of melancholy in some measure promotes learning, by increasing the penetration; for, whilst melancholy men are intent upon one idea only, the mind contemplates this object alone, and considers it on every side; nor is it distracted by other pursuits. But however proceeded to this pitch of madness, as to desire to purchase an increase of discernment at such a price? Of what advantage is science without health? He knows too much, who is rendered unhappy by his knowledge.

It cannot indeed be denied, that there are men whom nature has endowed with a Milonian stomach, and intestines of iron, who can bear with impunity the labour of the mind, bodily inaction, and excesses of gluttony. But are they therefore more happy? By no means? for then the vessels are overwhelmed by the load of humours, the cellular membrane swells with fat, the viscera are pressed on every side, the whole habit grows turgid, they become heavy and indolent, the slightest motion puts them quite out of breath, and they sweat all over; at last they die before their time, either of apoplexy, a suffocating catarrh, or other diseases occasioned by plethora: and it has been justly observed, that too strong a stomach has often proved fatal to the learned\*.

There

(g) BOERHAAV. ad institut. §. 895. tom. VII. p. 275.

\* LANCISUS de mortu subit. l. 1. c. 22.



There is no part of the body which is not at last affected by inaction; for the blood being vitiated, all the parts, which it washes, catch the infection sooner or later; the lungs are over-whelmed with a mucous substance, this gives rise to a cough, a shortness of breath, an asthma, an imposthume. This the illustrious TRIGLANDUS unhappily experienced, who, having contracted a bad habit of the body by a studious and sedentary life, from which BOERHAAVE himself dissuaded him, wasted away with an imposthume and died, after having suffered the most excruciating torments (*b*). By the mucous matter being hardened the lungs of SWAMMERDAM were turned into a quarry, and he spit up small stones a long time before his death.

That the stone, and other severer disorders of the bladder, are the fruits of too assiduous an application to learning, is proved by the sad experience of HEURNIUS, CASAUBON, BEVEROVICIUS, SYDENHAM, and many others, amongst whom may be reckoned the illustrious exile of Geneva, to whom Britain now boasts of having afforded an asylum †.

Whilst all the excretions are disturbed, the chief of them all, namely cuticular perspiration, is not free from disease. As perspiration is greatly promoted by muscular motion, which both prepares humours for secretion, and gives strength to the exhaling vessels; so it is greatly interrupted by the want of that motion; the humour that ought to be excreted is retained, and pollutes the whole mass of the fluids, and gives rise to rheumatic or catarrhus disorders and a troublesome phlegm. Of this HORACE complained long since, and with this complaint almost all men of learning are afflicted; for they can scarce read or write for any time, but they are immediately troubled with a slight running of the nose, or seized with a cough.

From

(*b*) MARKII Oratio funebris in obitum TRIGLANDII. Leyden, 1705.

† The famous ROUSSEAU; but he has since quitted the British asylum, and returned to France.

From the same source are derived those irregular fevers, which often occur without any visible cause, whilst the unperpirable humours, which have been generated by the defect of the stomach, and the want of motion, are unable to pass the cutaneous vessels.

Perpetual rest is alone able to torture those nerves, which have been weakened by the labours of the mind; and it often quite destroys them, even in those who equally give themselves up to indolence both mental and corporeal. For the nervous system is the last work of the human machine, and if any function fails, the nerves are immediately affected; so that often from their defect, whenever it appears, there results a well-grounded suspicion of a disease in the stomach, or in some other part. They are therefore vitiated in the learned for two reasons; for, being placed between the mind and body, they are punished though innocent, let which of the two be in fault; nor do they however go unrevenge'd; for the injuries they suffer on one part they carry over to the other, and thus, by a vicious circle, the mind hurts the body, and the body impairs the mind, and they with one accord injure and weaken the nerves.

The seminal fluid, which has been thought by some great men not to be very different from the nervous liquor, is likewise deprived of its force; and upon this principle, and from an accurate consideration of what each part in a father contributes to the formation of a son, it perhaps is not badly accounted for, why strong and illustrious sons are seldom the offspring of illustrious men: for the *punctum saliens* is contaminated at the first moment of life, whence it receives an injury which is not afterwards to be repaired by any art; and whilst the mind of the father was entirely given up to meditation, and his corporeal functions totally neglected, the vivifying liquor was perhaps defrauded of that part of elaboration which it should have had for the brain of the embryo.

From the general laxity of the fibres, which is demonstrated to the senses themselves, by the softness of the muscles, by the force of the artery, and by that lax-

ity of the gums which throws out sound teeth without any pain; from that general laxity, I say, arises that weakness which oppresses so many learned men, and which I lately lamented to see, whilst, as a friend and physician, I sat by our beloved ALPHONSUS (i), to whom the wishes of the public had promised the age of NESTOR; and all the hopes I had of his recovering his health were immediately banished, by a weakness greater than any I remember ever to have seen, and which the Herculean labours of his mind had brought upon a thin body. How great and irreparable a loss was then sustained by religion, virtue, the church, the city, his unfortunate family, and the youth of this academy! What a man, what a colleague, what a friend have we lost, illustrious professors! one who, as EUPHRATES of old, was remarkable for the greatest sanctity of manners, for the utmost care in the discharge of all the duties incumbent upon him, which were many in number; one whose complaisance was equal, who was intirely free from austerity, whose presence excited reverence, and not dread, for he was severe upon vices, not upon men; whose learning was extensive, whose discourse was copious, various, and, above all, pleasing; and yet not without a Platonic sublimity; one, in short, who was capable of persuading and working upon such as were most averse to his documents: having lived in the utmost veneration, he left behind him the highest regret for his loss. But to return to our subject from this last digression.

Thus have I treated of the two first causes of the learned; others remain still to be spoken of, and the first that occurs, whilst I am upon the subject of inaction, is the very posture of constant sitting, with the body stooping, and the legs bent; for this both hurts the lower extremities, and by obstructing the viscera of abdomen, soon occasions all sorts of disorders arising from

(i) JOH. ALPH. ROSSET, theologiz professor, & academiz, hoc tempore, rector.



from indigestion : and those learned doctors prudently consult their health, who indulge their meditations, not indeed standing, for that posture is not without its inconveniencies, but walking. And this is one of the bad effects of sitting, that it greatly obstructs the passage of the blood in the abdominal veins, which makes it stagnate at the anus, where it meets with less resistance, and causes those shocking piles that torment so many literati, and, though praised by some, certainly do much more harm than good.

Nocturnal lucubrations, which are hurtful upon many accounts, must have their place amongst the causes of disorders ; for whilst a great part of the night is spent in study, sufficient time is not allowed for sleep ; nor does a gentle slumber succeed meditation ; a circumstance which I have already lamented : for the oscillations of the fibres of the brain still continue, and that full ease of the internal senses is wanting which alone is capable of repairing our lost strength. They likewise pitch upon an unreasonable time for sleep ; for nature has assigned the first approach of night as the proper time for beginning to repose ; the night invites to sleep as well as the unwholesome air, and to this end its darkness and silence contribute : besides, the nocturnal air is cold and moist, and, when the sun retires, most animals feel their strength diminished, and night forces some of them to sleep even against their inclinations, as it does many plants.

The night air is so unfavourable to study, that the celebrated VAN SWIETEN knew a gouty man, in whom the slightest application of mind, and even the reading of a letter after sun-set, occasioned a fit of the gout. Nor should we forget that study forces the blood into the brain, and that nothing can be more dangerous than to study in bed ; for both sleep, and the posture of the body in sleep, increases the quantity of blood in the skull.

Therefore nocturnal studies produce all those disorders which the want of rest gives rise to ; the organs of sense

sense are principally affected; their strength is exhausted, the fibres are either worn or agitated by violent motions; hence arise an incoherent series of thoughts, a luxuriant imagination, deliriums, dreadful head-aches, and, finally, a total privation of sleep, scarce to be cured by remedies, and which often occasions fatal disorders.

The injuries of watching are increased by the ill effects of candles, which infect the air by their gross vapour, so pernicious to the lungs, the eyes, and the nerves. It is, therefore, the highest advantage imaginable to go to bed betimes, and rise early in the morning. *Aurora musis amica*: Aurora favours the muses.

The close air, which they always use, is hurtful; but I shall speak of the air hereafter. Nor should their dirtiness be forgotten, as some learned men, entirely neglecting the care of their bodies, and not at all solicitous about cleanliness, disgust others, and bring upon themselves those disorders which proceed from obstructed perspiration: for how can that skin perspire, whose pores are stopped up with dirt. Most of them are extremely faulty with respect to their teeth, which being filled with putrid filth, and exhaling a most nauseous stench, first infect all the adjacent parts, and the very saliva of the sick person soon after cause violent pains, and at last, falling before the time, leave the stomach destitute of the powerful aid of mastication.

Akin to dirtiness is the pernicious custom of some, who, deaf to the calls of nature, defer going to stool, and suppress their urine a long time, to avoid interrupting their studies; not reflecting that many dreadful disorders spring from this source.

For by too long a delay the secreted humours become too putrid, are attenuated, irritate the intestines or the bladder, vitiate the mucous matter, and sometimes occasion grievous disorders of the particular organ; the putrid matter being absorbed by the vessels with which all the cavities of the body abound, pollutes the blood; and, which is still worse, the nerves become disused to  
obey

obey the stimulus; nay, they sometimes, by too much tension, begin to grow paralytic; so that the expulsive force, for the voiding of excrements or urine, almost entirely ceases, and should every day be renewed by art. Whilst the illustrious TYCHO BRAHE riding in the same chariot with the emperor, suppressed his urine, he payed for his illtimed modesty by death; and I even now have under my cure a man of learning, who by a long suppression of his urine became unable to contain it; nor can he void it when he thinks proper, but it runs from him night and day by drops.

Retirement from all human society is likewise hurtful to them; for man, whom nature made for man, she intended also should be benefited by society.

But nothing renders study and application more pernicious than the sadness that accompanies them: study is capable of clouding the temper of the happiest man with melancholy: if real and external causes of grief are added to this, the mind, overwhelmed with so many strokes, at last sinks under them, and in its own ruin involves that of the body. Anxious cares are likewise hurtful; so that I can hardly conceive how great men, whom the difficulty of their undertakings kept in unremitting meditation, and whom the uncertainty of events filled with continual anxiety, could go through with such great undertakings. Nature endowed CÆSAR, MAHOMET, CROMWELL, PAOLI, and some few more, with faculties which she refused other mortals, and which, notwithstanding, would scarce have enabled them to perform such great exploits without the assistance of sobriety and incessant action.

We should not, however, imagine, that the learned alone destroy their health by mental labour; it is of no consequence what the object is that engages the mind, if it applies a considerable time and with earnestness, it wastes both its own strength and that of the body. Kings, senators, ministers, ambassadors, and all those concerned in the administration of public affairs, are subject to the same unhappy fate which the learned



learned deplore, if they labour with equal assiduity, in transacting public affairs, as the learned in perusing books. But it is their happiness, that, in the various business and dissipation of their places, they are obliged often to quit their closets, and even against their wills are, by a salutary necessity, compelled to take frequent exercise: the chief use of this is, that it admirably prepares the blood for the generation of fresh animal spirits, and in the same time it brings a greater quantity of blood to the seeing organs, and so restores what thought had exhausted, and frames new instruments for the thinking mind. But nothing can force the studious from their books, and they are quite enervated by inaction: to palliate which you will, perhaps, bring some examples of men, who have lived to a great age, though they used but little or no action. There are but few men; but you will, I doubt not, bring many women. Take notice, however, that, though they had not much muscular motion, they had many other helps, by which nature promotes the circulation of the blood, viz. an agreeable stirring of the passions, which excites, and does not destroy; a constant cheerfulness and eternal loquacity, and other assistances of a similar nature; they likewise use but little food. The case is quite different with the learned: they do not live with the same sobriety; and therefore it is no wonder that they enjoy their health worse than any other class of men.

Thus have I laid before you the chief causes, from which the diseases incident to the studious take rise; and I should never make an end, were I to enumerate the inferior causes, which professors have a bad custom of assigning from their own invention: I shall therefore pass by all the secondary causes. But there are men, truly learned, illustrious votaries of the muses, who, besides the disorders that spring from too assiduous an application of mind, experience others, owing to the nature of the object that engages them. Anatomists often contract malignant fevers by breathing putrid air, and other diseases from the corruption of

the bile, from the matter in which their hands are constantly immersed, a slight excoriation arising, or an inconsiderable wound, which some-times end in their deaths. Chymical experiments are attended with danger, and an acid smoke, of a very penetrating nature, would have killed the great BOERHAAVE, if there had not been at hand an alkaline spirit, which overcame the acid and expanded the compressed lungs. Botanists have been often hurt by the plants for which they have so strong a passion. These, and the like, rather relate to the disorders of artificers, (excuse the expression); but this discourse turns upon the disorders which study brings upon some of the organs.

The first that offer are the eyes, which constant attention so fatigues, that I have often seen doctors who had not attained to their thirtieth year, and yet could hardly bear the light, especially candle-light; and were scarce able to read a few pages without their eyes being suffused with tears, then growing dim, and at last quite incapable to distinguish any object. But the eyes are much sooner and much more easily affected, by reading at night; for there is not a man living who has not experienced, at least once in his life, how much they suffer by the motion of light and the irritation of smoke.

Orators have disorders peculiar to themselves, which are of a very grievous nature: for however reading aloud may be of service to the lungs, vehement declamation is hurtful: and how often do preachers or lawyers pass whole days and nights in their studies, when the lungs, unequal to the efforts of speaking, are severely injured. How much more happy are those pastors of the church, who cultivate learning, but are kept from their studies by other avocations, being in this respect equally privileged with the physicians, whom the health of their fellow-creatures does not suffer to impair their own health by study. Happy likewise are all those whom the nature of their business

business calls off from study; for though they are not thereby exempted from the labours of the mind, the change of their employments is however a great consolation to them. But unhappy are those preachers, who, being exempt from other ecclesiastical functions, live only to study, and compose eloquent discourses; unhappy those lawyers, who are entirely taken up with managing and pleading causes; for their health is insensibly impaired by the life they lead, their throat, wind-pipe, and lungs, are irritated, heated, and inflamed; hence proceed catarrhs, hoarseness, a broken voice, spitting of blood, a cough, a fever, great weakness, and at last a consumption; and, whilst they give light to others, they are extinguished like the snuff of a candle, unless they take care of themselves. This is what CICERO did, who, being told that he was beginning to be consumptive, avoided pleading for two years, by the advice of his physicians; in which time he recovered his strength and health, which had been greatly impaired (k).

These, worthy auditors, are most of the disorders that are occasioned by too great an attachment to study, or a continued application of the mind to any object whatever; nor are we to imagine that all undergo the same sufferings; much variety is here occasioned by the various constitutions of men, by their different ages, and the diversity of their external circumstances. There are few or no bodies but what have some weak parts, which suffer the first attacks of every disorder. He, whose stomach is naturally weak, or who has rendered it so by living, in a manner not suited to his constitution, will first complain of pains in the ventricle,

K 2

whilst

(k) The disorders of orators and singers are the same; but the bodies of these being opened, have often shewn inflammations, suppurations, ulcers in the lungs; nay, the illustrious MORGAGNI saw a young man that had an excellent voice, whose wind pipe and throat being affected, could swallow nothing, and, whilst he attempted to suck down the yolk of an egg, was suffocated and died. De sedib. & caus. tom. 1. p. 228.



whilst the nerves, which he received strong in a weak body, are still in a good state. On the other hand, he who is troubled with weak nerves, but has a good stomach, will long suffer all sorts of nervous disorders, the digestion remaining unhurt.

He, in whom the muscular or cellular fibres are relaxed, will complain of lassitude, drowsiness, weakness, swellings, his head and stomach remaining unhurt. Another will suffer all the disorders incident to the lungs, who received them from nature not indued with a proper degree of strength. In these the vascular system of the head is weak, they are troubled with incessant headaches, or bleeding at the nose, to which other studious youths are obnoxious, their intense application to study forcing the blood upwards. Finally, every man, according to the part affected with weakness, is liable to complain of some disorders more than others.

Even strength itself has its disadvantages; for whilst robust and vigorous young men devote themselves to study with unbridled ardour, the power of the soul, being roused and strongly stimulating the whole system, so increases the action of the solids, that there arise diseases occasioned by too violent a motion, such as inflammations and malignant fevers; and when these disorders are once begun, they return for some years, till the strength being entirely broken, chronical disorders succeed, according to the common fate of mankind.

A great deal depends upon the age, with regard to which we should not be so indiscreet as to bear too hard upon youth, nor exact from them over great tasks; for nothing so totally exhausts and destroys the strength. I have often found boys of a penetrating genius, tinctured with learning beyond what could be expected from their years, and always with some concern, as I saw how it would end; because our youthful days should be consecrated to exercise, and to acquiring strength by its means, and not to severe study, which obstructs both vigour and growth.

There

There have been examples of boys, who, before they had passed their sixth year, appeared by their sudden growth to be men: the last example of this sort, we meet with in the memoirs of the French academy: but to listen to the sequel: the understanding continued that of a child in a well set body, and, the strength being so soon exhausted, could scarce support a life of 12 years. Whilst the powers of the mind, or in other words, the strength of the brain surpass the age, nature, which is unequal to many tasks, forgets the body; the whole machine is overwhelmed with languor, the fibres want strength, and severe disorders bring on an untimely death. JOHN PHILIP BARATHIER lately afforded us an illustrious and well known example of the truth of this observation. You all lament another PHILIP, whom you knew, and whom I regret not having known more intimately, who being from his early infancy endowed with a penetrating genius, and addicted to study at that time of life, which nature intended should be dedicated to strengthening the body, was attacked by the severest disorders, and could recover his health only by the most abstemious diet, and by totally relinquishing his studies: but soon, unmindful of his weakness, he by an untimely death paid for his premature learning. May a better fate be reserved for LE FRANÇOIS, a youth of fourteen, who, as I hear, has acquired a high reputation amongst the French, by his genius and extraordinary erudition.

I have often seen with concern the children of peasants loaded with labour above their age and strength, but a still worse error is committed, when the mind of a child is forced to apply before the time, and beyond its abilities; and this is generally productive of the worst consequences, for the powers of the mind brought to maturity by a pernicious art, are short lived, and soon grow old: and who has not with grief seen children of the brightest hopes, hardly give proofs of common understanding, when grown up? The earth is a long time prepared to admit seed, and before it is sown, receives

that strength, which afterwards impregnates it with fertility from the sun, the air, and the plough; then the grain springs up, vegetates, flourishes, and brings good fruits to maturity.

But if early studies are hurtful, it is no less dangerous to attach oneself to study in an advanced age; for habit becomes gradually a second nature when we begin from our tender age; but at an advanced period it is no longer susceptible of new habits; and the fibres of the brain, accustomed to rest, are torn before they can receive new and regular motions. I not long since with difficulty cured a native of this country, who in his fortieth year laying aside mercantile business, to pore night and day over the works of NEWTON, CLARKE and LOCKE, had totally disordered his brain. He recovered his health by remedies, by a cessation of study, and amusing conversation; but the joy was but short-lived, for by again dipping into the sublime, geometry, and metaphysical abstractions, he once more lost his senses (1).

Nor is it less laborious to continue our accustomed studies too long, when old age approaches. The soul that animates our bodies, is indeed immortal; but so long as it is connected with a feeble frame, it must be influenced by its nature.

*Gigni pariter cum corpore, & una  
Crescere sentimus, pariterque senescere mentem.*

*Besides, 'tis plain, that souls are born and grow,  
And all by age decay, as bodies do.*

CREECH'S Lucretius, book 3.

The labours of the mind should therefore be retrenched,

as

(1) It often proves hurtful to men of learning themselves, when in an advanced age they pursue a new study; for this gives rise to a new order of ideas, which receives no assistance from all the traces before left upon the brain: new fibres must receive new motions, a laborious work to the organ already debilitated, and which often throws men of first rate capacities into lingering disorders.



as the declining powers of the body direct; the latter becomes incapable of bearing the same burthens, the former of pursuing the same studies, which in this period of life soonest break the constitution, and destroy the brain; and are of so little use, that old men consult their glory no less than their health, by retiring betimes.

*Solve senescentem mature sanus equum, ne,  
Peccet ad extremum ridendus, & ilia ducat.*

*Loose from the rapid car your aged horse,  
Left in the race, derided, left behind,  
He drag his jaded limbs, and burst his wind.*

FRANCIS' Horace, lib. i. ep. i.

But it grieves me, respectable auditors, that you should be obliged to hear of so many disorders, and I to give an account of them; so I shall say no more of so melancholy a subject, but proceed to treat of the remedies for the several diseases.

What lover ever had eyes to see the blemishes of his mistress? What lover ever ceased to admire his mistress's beauty? This is another pernicious effect of learning; it occasions a sourness of temper. Philosophers think themselves wise in every thing; 'tis a difficult matter to persuade them that they every day injure their health by their manner of living; you may advise, intreat, and even scold them, it will be all to no purpose; they impose upon themselves a thousand different ways; some by too great a confidence in their strength, others by the hopes of impunity from the punishments being delayed; others again by the deceitful defence of the power of habit, and others again by the still more deceitful example of other men's good luck; others by other motives; and all, by that steady adherence to their purpose, which they think becoming in a man of virtue, are so blinded, that they are not affected by future sufferings, and hardly even by those they have already incurred. I shall not however, neglect my duty

as a monitor, and if I should fail of success, it will be at least some merit to have attempted in a design of so much utility. Preservatives are to be offered to such of the studious as are still in health, and remedies to those who have impaired their constitutions.

The sure and only preservative is for the mind to be often unemployed, and the body to labour. This does not hold with regard to all men of learning; there are some whose meditations should be disturbed upon no account whatever. DESCARTES frames a world, NEWTON revolves the whole system of the universe in his mind. MONTESQUIEU makes laws for all nations; let no body interrupt them, let all nature be silent, they labour for us, let the good of the people be the supreme law; they were born to cultivate those studies. But how few are there, whose labours are of such consequence? Most studious men lose their time, and break their constitutions to no purpose; one makes a collection of common-place topicks, another embellishes such as are thread-bare, a third anxiously investigates matters of no utility, others make trifles the subject of laborious researches, and all are equally unmindful of the unprofitableness and danger of their pursuits. But be vigilant for their good; knock at their doors; rouse them from their lethargy; make them, whether they will or no, lay aside their studies for hours together, and let their minds not be totally abandoned to idleness, but recreated by gentle ease, whilst their strength is restored by exercise. At the beginning of my discourse I displayed the advantages of exercise; let it therefore be observed as an inviolable rule by the learned, to dedicate an hour or two every day to walking, that the lungs may be recreated by a free use of the air, that the stagnant humours may be thrown off, perspiration renewed, the limbs strengthened, and the nerves repaired. BOERHAAVE chose for this purpose the hour before dinner. Nor is walking alone sufficient. I would likewise recommend riding, which acts admirably upon the head and lungs, and above all upon the abdominal viscera,  
by

by repeatedly agitating them; as likewise all the other exercises, which were carefully cultivated both by the ancients and our ancestors; but which we, to our great detriment, have neglected. Let us not forget **HERODICUS**, a man of learning, endowed with extraordinary intellectual faculties, but the most infirm of all mortals, who by exercise alone so confirmed his health, that he lived entirely free from disorders to a hundred years of age, and composed a treatise upon the gymnastic art. Let us not forget **SOCRATES**, the wisest of mankind, who thought it worth his while to learn this art. **STRATO**, being troubled with the spleen, had recourse to exercise, which cured him. **HYSMONÆUS**, being afflicted with a weakness of the nerves, had recourse to the olympic games, and by that exercise overcame the disorder. Sailing should have its share of praise, amongst other sorts of exercise, whose power in removing the obstructions of the viscera, throwing off the bile, restoring the lungs, renewing perspiration, and strengthening the fibres, the ancients were well acquainted with: and it has lately been demonstrated by the illustrious **GILCHRIST**, and was likewise preferred to all other sorts of carriage by **AUGUSTUS CÆSAR**, who when he had any occasion to travel, chose rather to go by sea than otherwise, if it was possible. **AUGUSTUS CÆSAR**, may in many respects be compared to the studious and learned; “*eloquentiam enim studiaque liberaliora ab ætate*” “*prima & cupide & laboriosissime exercuit; & graves*” “*valetudines per omnem vitam expertus est; & distil-*” “*lationibus, & rheumaticis doloribus, & calculo obnox-*” “*ius vixit, & præcordiorum inflammatione aliquoties*” “*tentabatur; litteratis vero sapientior;*” “for he culti-

“vated eloquence and the liberal arts from his early

“youth with taste and diligence, and was during his

“whole life a valetudinarian; he was troubled with

“catarrhs, rheumatic pains, and the stone, and was

“sometimes likewise attacked with an inflammation of

“the parts about the heart; but, being more prudent

“than most men of learning,” *he took great care of his*  
*valetudinary*



*valetudinary constitution (m).*" Riding in an easy chariot is of little service; of still less the easy succussions of the several machines which have been invented by modern industry for moving the sick about in their chambers; but I set a high value upon all those plays or diversions which oblige a man to exercise both his arms; such, for example, are shuttle-cock, and others of the like nature.

Do not be concerned, my worthy auditors; the time which you devote to recreation is not lost to learning; you will presently apply to your studies with renewed alacrity, and, whilst your strength and health are preserved, a long life will abundantly recompense the hours dedicated to the care of the body. In leisure likewise those sublime ideas may rise, which the obscurity of your musæum would for ever have suppressed, *for lively and vigorous geniuses make the more noble efforts, the more intervals of leisure they allow themselves (n).* I have a particular friend, who, in his walks in the country, has composed books that will immortalize his name; *for the souls of those who walk under the canopy of heaven are exalted:* and PLINY the younger observes, *that it is surprizing to what a degree the soul is roused by the agitation and motion of the body:* close confinement contracts the body, the oil of the lamp, as it were, infects the thoughts by its smell, and by too intense study we become incapable of application. PLUTARCH has an ingenious observation, that as plants are nourished by moderate watering, but overwhelmed by too much, so the soul is improved by moderate studies, but overpowered by excessive studies (o). Take my advice therefore, you men of learning; you will one day repent your austere retirement; but it will be too late to look for a remedy when the danger is at hand; and foresight becomes the wise man: don't think to excuse your

(m) SÆTONTIUS in vita OCT. AUG. cap. 82.

(n) VALERIUS MAXIMUS, lib. 3. c. 6. p. 140.

(o) De education pueror. cap. 12.

your dangerous errors; the experiment is not made upon a vulgar soul, the life of a man of learning is at stake; neither alledge, in excuse for yourselves, the examples of others; nor your own strength, which you break every day; nor vain custom, for we can never use ourselves to a disease; nor the impunity of your early years, for reiterated strokes will break what one alone could not. Lay aside, therefore, the agitations of your minds, and exercise your bodies; for exercise is of so much service to the mind, that HOFFMAN (p) has by its means made stupid men attain to a degree of understanding; and do not despise the health of the body, with the assistance of which the labour of the mind will become more supportable; for the powers of the mind grow dull, if the strength of the body is in a wavering unsettled state. Physicians have power over souls; and DESCARTES has justly observed, "Ani-  
 mum adeo a temperamento & organorum corporis  
 dispositione pendere, ut si ratio aliqua possit inveniri,  
 quæ homines sapientiores & ingeniosiores reddat  
 quam hactenus fuerit, credendum sit illam in medi-  
 cina quæri debere." "That the soul depends so  
 much upon the constitution and disposition of the  
 corporeal organs, that, if there could be a method  
 found to render men wise and ingenious, it seems  
 probable that it should be sought in physick (q)." There is a regimen calculated for the studious, of which I shall now give a succinct account (r).

HIPPO-

(p) De motu opt. corpor. medicin. § 9.

(q) De methodo, No. 6. There is likewise a remarkable passage in MOSES MAIMONIDES, one of the most ancient of the Arabian physicians. As life and health, says he, contribute greatly to the worship and knowledge of God; but a man in an ill state of health is unable to contemplate the works of God as he should do; a man ought to take particular care to avoid whatever is hurtful to his body, and should endeavour to procure whatever contributes to keep the body in health and strengthen it. De sanit. tuend. init.

(r) It must be acknowledged, that a man of learning, indefatigable in his studies, if he observes an exact regimen, innocent and moderate, will find the disadvantages attending his way of life more supportable than another, FELICI dissertazioni, p. 203.

HIPPOCRATES, in three words expresses the whole alimentary diet of all ages, all ranks of men, and all conditions, *ὡς ὁ ἀνὴρ ἐν καὶ ἐν τροφῇ*, food should be as labour; for, as he says elsewhere, if the aliments are overcome, that is, if they are subdued by the powers of the body, they invigorate it; if they overcome it, that is, when they get the better of the digestive powers, they give rise to many bad effects: and PLUTARCH justly observes from HIPPOCRATES, that health arises from the exact equality of bodily exercise and the aliments taken. The reason is, the body by its own force makes its own juices and humours out of the aliments it uses: nor is its state the same in the robust ploughman and enfeebled doctor. Whilst the former, by incessant exercise, by breathing every day the wholesome country air, by a chearful and vacant mind, unembarrassed by perplexing meditations, and by soft slumbers continually repairs his strength, he can bear any sort of food; the salival, gastric, intestinal, and bilious liquors, elaborated to the highest perfection, thoroughly dissolve the most glutinous fat, and even salt pork hardened by smoke; the strength of the muscles of the stomach and intestines is unimpaired; they suffer nothing to stay beyond its time in their cavities; and as the aliments are digested, their remains are thrown out. How different from this is the case of the man debilitated by study! The hard bowels of the mower can digest any thing, the soft viscera of the learned or indolent are incapable of digestion; the latter therefore should maturely deliberate, what his powers are equal to, and what not.

Give the labouring man thin broth, small cabbage, jellies, puller's flesh, or white bread; the force of the viscera and constant labour will soon digest these, he will immediately grow hungry, sweat all over, and in a short time his strength will fail him, if it be not soon repaired with fat bacon, hard cheese, and black-bread. But let this food, or food of the like nature, be eaten by the weak inhabitants of cities, who are unequal to the labour of digesting it, dreadful diseases will soon arise



rise from thence, the aliments being converted into poison. These are golden words of BOERHAAVE: "Eru-  
 "diti viri (inquit) nolunt gulæ temperare, & audent  
 "eadem edere quæ rustici, verum non ferunt hunc vic-  
 "tum; optent, aut ferri a studiis, aut a duris cibis."  
 "Men of learning, says he, will not live temperately;  
 "but are so in discreet as to eat the same food that la-  
 "bouring men do, and which they are not able to bear;  
 "so they should wish either to be exempted from the  
 "necessity of studying, or from that of eating strong  
 "food (s)," which if they continue to live upon, there  
 arise obstinate obstructions in the abdominal viscera.

The strength of the aliments is estimated not by the nature of the food alone, but by its quantity: it is not therefore enough to be choice in the quality: attention should likewise be given to the quantity of the food. I will assert with confidence that an error in either respect is attended with very bad consequences; but it is worst of all when it relates to the quantity. A due observation of the bodies of learned men will shew what aliments should be chosen, and what avoided: to enumerate all the various sorts would be tedious and disagreeable; it will be sufficient to mention the principal kinds.

All fat, viscid aliments, all aliments puffed with wind, or hardened either by art or nature, are hurtful. The ancients condemned all sorts of pulse; and PYTHAGORAS strictly forbid his disciples to eat beans, as they have an extraordinary flatulency, highly destructive to the tranquillity of mind necessary to one who investigates truth. Every body knows, that whilst the stomach swells the mind is depressed with languor, and becomes incapable of performing its functions. The tender flesh of all young animals is of great service, except those of swine and geese; not when boiled in copious broth, for when they are deprived of their nutritious juices, but when roasted or boiled in a small quantity of water. Such

roots

(s) Prælect. in inst. § 1036, tom. VII. p. 337.

roots are wholesome as consist of a light flour, not without a mixture of salt or sugar (1); soft herbs, which are neither too acid nor too emollient. Nor should the several sorts of seeds be denied their praise; nor ripe fruit, concerning the use of which, however, a caution should be observed; for they relax, dissolve, cause acidity, and thereby are the less fit for studious men. But take notice, amongst the most severe disorders of the learned are reckoned the stagnation, the thickening, and the hardening of the bile, which defects are best remedied by fruits that swell with saponaceous juices, as cherries, strawberries, raspberries, gooseberries, peaches, grapes, pears, and other fruits of the like nature, which studious, sedentary men cannot well do without, especially in summer. Care should be taken to prevent their being detrimental, by eating them when the stomach is empty, either with or without bread, and long before, and long after having drunk wine; for thus they neither disturb the digestion of the other aliments, nor, being hardened with wine, prove more difficult of digestion themselves, nor are turned into a sourness, but act like a mild and gently stimulating soap, resolve concretions, accelerate the course of the bile, stimulate the sluggish intestines, and, by removing obstinate costiveness, put an end to grievous disorders, and either prevent hypochondriac melancholy, with the matter from whence it arises, or cure it. They are of great service to those, whom severe study throws into inflammatory disorders, or slow fevers, proceeding from a drying up of the humours; but they are hurtful when, the strength being broken, the fibres have lost their tone, and the fluids are too thin. Eggs boiled in such a manner as to be supped are also very good for them; for these, being inspissated by boiling, mix with the harder aliments.

Well-

(1) Many plants fit for use, and perhaps most such, and many others, by means of an easy art, give out a great quantity of excellent sugar, not much inferior to that of sugar-canes. Eight ounces of the fresh juice of the skirret yield an ounce of the best sugar. MARGRAFF Mem. de l' Acad. de Berlin.

well-baked bread and decoctions of bread are also of service to them. Milk is wholesome, provided it does not grow acid in the stomach. Chocolate deserves to be recommended; for with its soft flour and penetrating oil, and a sort of gentle bitter irritating taste, it soon repairs and restores the strength: do not, however, use it to excess; it is a very nutritious aliment, and increases plethora in those of a plethoric disposition; it is fat, and by too great lubrication renders the stomach and intestines incapable of being stimulated, so that neither does the stomach grow hungry, nor are the excrements voided: it moreover grows acid, and causes a gnawing of the stomach. Various dishes, which may be made out of these by a judicious and prudent mixture, are very wholesome; but it is better to use only simple food, either raw or boiled.

*Accipe nunc, victus tenuis quæ quantaque secum,  
Afferat. Imprimis valeas bene nam variae res,  
Ut noceant homini, credas, memor illius esca,  
Quæ simplex olim tibi sederit, at simul assis  
Miscueris elixa, simul conchyliis turdis,  
Dulcia se in bilem vertent, stomachoque rumultum  
Lenta feret parvula.*

Now mark what blessings flow  
From frugal meals: and first they can bestow  
That prime of blessings, health; for you'll confess  
That various meats the stomach must oppress,  
If you reflect how light, how well you were,  
When plain and simple was the cheerful fare;  
But roast and boil'd when you promiscuous eat,  
When fowl and shell-fish in confusion meet,  
Sweets, turn'd to choler, with cold phlegm engage,  
And in the stomach civil warfare wage.

FRANCIS'S Horace, lib. 2. sat. 2.

Relaxed fibres, quite benumbed by a sedentary life, sometimes require a gentle stimulus; therefore a mild seasoning



seasoning is not to be disapproved of, as salt, sugar, cinnamon, nutmeg; and such agreeable aromatics of our own country as every man cultivates in his garden; thyme, sweet-marjoram, fennil, chervil, and others of the like nature: but those are to be avoided which stimulate with a sharp salt or oil; that nature can scarcely overcome. I hate garlick as much as HORACE himself; nor do I better like pepper and mustard, which are pernicious for their parching oils: but I advise you, however, not to make an immoderate use of the milder sort of seasonings, but use them as remedies, and not for a constancy; for their frequent irritation increases frictions, wastes the fibres, and shortens life.

There are other helps to digestion, and the chief of these is exact mastication, which greatly forwards the work of the stomach: this is highly recommended by physicians; but slighted by others very foolishly, and greatly to their own prejudice. It both increases the secretion of the saliva, which is the best menstruum of the aliments, and, whilst it divides the latter into minute particles, it increases their superficies, whence they are more easily penetrated by the gastric juices; consequently there is a quicker digestion, a more compleat solution, no spontaneous corruption, no irritating of the stomach. Therefore let not the learned despise mastication, or rather not forget it, whilst at their meals they are, by a pernicious habit, intent upon other things: whether they read or meditate, the stomach suffers, because the nerves languish when the mind thinks attentively, and experience proves to the very eyes themselves, that digestion is badly performed when the nerves languish; for upon binding the nerves of the stomach, the illustrious HALLER, who made so many extraordinary discoveries, often saw the aliments totally corrupted, instead of being digested.

Digestion is performed slowly in men of learning, therefore fresh aliments should seldom be given them; because the state of the stomach is very different when it is half full of undigested aliments, from what it is when

when entirely void of aliments, and overflowed with the gastric fluids, ready for the use of concoction. Therefore to make three meals a day, one somewhat considerable, the other two rather slight, will be sufficient for men of learning. The following order with regard to eating, or rather living, pleases me highly, and is recommended by the experience of numbers: Upon rising in the morning a studious person should drink a glass of pure water; in about an hour after he should breakfast; six hours after he should dine, having first past one hour in walking; after dinner he should allow himself an hour or two of leisure, because to sit down to study immediately after eating is highly pernicious: his supper should be light; for this, there are reasons of the greatest weight, because, as I observed before, sleep occasions a dangerous plethora in the head; therefore the fullness of the vessels should not be increased before sleep by too large a meal (*u*): add to this, that the functions of the nerves are suspended during the time of sleep, and they cannot perform digestion; at last a soft and refreshing slumber is produced by the absence of all irritation: but if the stomach is overloaded with aliments, the sleep is interrupted, as the nerves are continually affected by the irritation of digestion. Hence a plentiful supper causes a heaviness in the head, sleep is disturbed, digestion interrupted, the strength impaired, and the health entirely destroyed. But a Platonic supper is praised, because it is not only agreeable at the time, but the day following.

*Nam corpus onustum*

*Hesternis vitiis animum quoque pręgravat una,*

*Atque affigit humo divinę particulam aurę.*

*Alter, ubi dicto citius curata sopori*

*Membra dedit, vegetus pręscripta ad munia surgit.*

L

The

(*u*) Many phenomena prove this plethora; and it is evinced by a simple observation, and one that occurs daily, viz. by those convulsions of the lower jaw-bone which cause a collision of the teeth in sleep, and that more strongly in boys when they have eat a hearty supper.

*The body too, with yesterday's excess  
 Burtben'd and tir'd, shall the pure soul depress;  
 Weigh down this portion of celestial birth,  
 This breath of God, and fix it to the earth.  
 Who down to sleep from a short supper lies,  
 Can to the next day's business vigorous rise.*

FRANCIS'S Horace, lib. 2. sat. 2.

Most learned professors, you well know him, whom as a colleague you all loved, that eminent man, who, when he had broke his constitution by a profound study of antiquities, history, and both the civil and common law, restored it considerably by the simple remedy of supping upon milk.

Not to sup at all, however, is dangerous; for the nerves of the learned are moveable, and easily irritated; and if the chyle is not soon renewed by a supply of new aliments, such is the acrimony of the blood, already often subdued by the strength of the viscera, that it is an irritation of the nerves, which totally destroys the sleep. The example of AUGUSTUS CÆSAR, who was very moderate in eating, is very properly proposed to the learned, as is likewise that of the illustrious LEWIS CORNARO, who restored his ruined health by a regular diet alone; and eating but the fourth part of the quantity of victuals eaten by his fellow-citizens, lived to an advanced age, vigorous and chearful. Long since BARTHOLUS, one of the most eminent lawyers, and a man well versed in polite literature, reduced the quantity of his food and liquor to a certain weight, and by that means preserved his intellectual faculties unimpaired during the whole course of his life (\*). A regular diet is capable of effecting every thing: studious men, however, whilst they take care of their health, ought not to forget, that a man, who is well, should not so confine

(\*) It was justly observed by THEOPHRASTUS, that to eat much, and to live upon flesh, deprives men of the use of their reason, blunts the faculties of their minds, and renders them dull and stupid.



fine himself to rules, as not to break through them, when he thinks proper: for a constant habit is real slavery: and I have known several learned and studious men, who were so scrupulous with regard to their hours of eating and going to bed, that their minds seemed to be chained to their bodies, which is the most shameful sort of servitude: nor can he be said to be either a lover of virtue or of learning, who cannot pursue his studies if he be obliged to wait a little longer than usual for his meals, if he has not slept quite enough, or if the air be too hot or too cold.

I have hitherto spoke only of solid food; liquors are not to be forgotten. In the last age a grievous error crept into physick, that health is the better, the more fluid the blood is; and by the advice of BONTEKOE chiefly a pernicious custom prevailed of drinking warm liquors both night and day, whereby the human species has greatly suffered, and those of the present age sorely lament the injury which their forefathers sustained in the last by impairing the strength of their nerves.

Grave authors, who knew better, and chiefly the illustrious DUNCAN, with BOERHAAVE, and the whole school of Leyden, have proscribed this error; and if they have not reformed the abuse, have at least greatly checked it. But most valetudinarians still lie under the same prepossession, and, looking upon an over thick blood as the source of their disorders, have recourse to warm beverages, which others reject. It can scarce be told, it can scarce be believed, how many disorders proceed from this source: and I will take upon me to assert, that those pernicious bowls, overflowing with warm liquors, are the true box of Pandora, without even hope remaining at the bottom; for they are prolific sources of hypochondriac melancholy, which both adds strength to and is itself one of the worst of disorders. Nor is it to be wondered at, if warm beverages are more hurtful to studious men, who are naturally weak and feeble, than to others; for they are not troubled with an over thick, but, on the contrary,

with too thin a blood. You are well aware, respectable auditors, that the density of the blood is as the motion of the solids: the fibres of the learned are relaxed, their motions are slow, and their blood of consequence thin. Bleed a ploughman and a doctor at the same time: from the first there will flow a thick blood, resembling inflammatory blood, almost solid, and of a deep red; the blood of the second will be either of a faint red, or without any colour, soft, gelatinous, and will almost entirely turn to water. Your blood therefore, men of learning, should not be dissolved, but brought to a consistence; and you should in general be moderate in the article of drinking, and cautiously avoid warm liquors.

The blood flows with difficulty in weak persons, stagnates, obstructs, not on account of its own density, but by the feeble contraction of the vessels, which is increased by hard drinking. The stomach first feels the disorder; because the liquors prepared by nature for the business of digestion, being immersed in the liquors that are drank, become unable to perform their functions, and the food is imperfectly dissolved on account of the imperfection of the menstrua. The fibres of the stomach, being too much stretched, at first give pain, and soon after lose their force, and become unable to push forward the aliments: they therefore load the stomach by being stopped: to cure which the sick persons again have recourse to drinking, which with the force of a torrent drives these half-digested aliments to the intestines. All these symptoms grow worse if warm beverages are drank; for this is the force of heat, it both relaxes the fibres, and, by more powerfully dissolving the phlegm, occasions more severe pains in the stomach.

Amongst the favourite beverages of the learned, the worst is the infusion of that famous leaf, so well known by the name of tea, which, to our great detriment, has every year, for these two centuries past, been constantly imported from China and Japan. This most pernicious gift first destroys the strength of the stomach, and, if it be not soon laid aside, equally de-

troys

stroys that of the viscera, the blood, the nerves, and of the whole body; so that malignant and all chronical disorders will appear to increase especially nervous disorders, in proportion as the use of tea becomes common: and you may easily form a judgment from the diseases that prevail in every country, whether the inhabitants of it are lovers of tea, or the contrary. How happy would it be for Europe, if by unanimous consent the importation of this infamous leaf were prohibited, which is endued only with a corrosive force, derived from the acrimony of the gum with which it is pregnant: for experience shews, that what it has of an astringent principle is lost in the warm water.

I will not pass the same censure, though I must pass some censure, upon that celebrated beverage coffee, which both hurts by the power of the warm water, and by irritating; for nature cannot use itself to irritation without suffering. It is however rendered powerful by a nutritious flour, and by a bitter and strengthening aromatic oil; so that it may well be laid up in apothecaries shops as an useful remedy, but is improperly used in kitchens as part of our daily food. It raises the spirits, eases the stomach when loaded with phlegm, cures the head-ach, causes a cheerfulness of mind, and, if we may believe some people, increases its penetration; for which reason the learned are so fond of it. But was coffee used by HOMER, THUCIDIDES, PLATO, XENOPHON, LUCRETIVS, VIRGIL, OVID, HORACE, PETRONIVS, and the other great men of antiquity, who as much excelled us in genius, as we surpass them in experience and knowledge of nature.

Warm liquors being therefore justly set aside, cold water should be used, which has as much power in strengthening as the former in weakening the body.

Wine deserves its share of praise; but I have the same opinion concerning wine, with respect to the learned, that I have in regard to coffee, that it should be used as a remedy, and not as a drink. The Creator gave pure water as the universal drink, which he made



a menstruum to all sorts of food, and agreeable to all palates: it should be chosen cold, soft, and mild; for it both strengthens and cleanses the viscera. Hence it has been generally looked upon as a panacea both by the Greeks and Romans, and it is the best of remedies when dryness prevails, or bile or acidity are in too great quantity (\*). Digestion will be more easy, sleep sweeter, the head seldomer clouded, and the strength greater, if, laying aside wine, we quench our thirst with pure water alone.

Wine has one fault that renders it exceedingly hurtful to the learned; it forces the blood into the brain, and increases the several disorders thereof, head-achs, megrim, and the like, which are hardly to be cured without laying aside the use of wine: all these disorders are wonderfully removed by drinking water, which prevents too great a quantity of blood from being gathered in the head. What wonder is it then if it increases the intellectual powers, and if those who drink water alone have a more tenacious memory, a more lively imagination, and quicker preceptions than others. The abstemiousness of DEMOSTHENES is a great example in favour of drinking water, which has likewise this virtue, it in a surprising manner subdues those catarrhs with which the learned are so often troubled, and which the use of wine is apt to increase. They have often acid eructations; but wine sharpens an acidity, water dulls it.

I will solemnly own, that I have cured more nervous disorders, (and learned men are generally troubled with such) by retrenching the quantity of liquor, forbidding all warm beverages, as well as wine, and recommending exercise, than by any other remedies. Nor should the danger of leaving off what people have been used to, be alledged: there is no such danger; or, if there be, it is easily avoided by a gradual disuse.

But take notice, if sometimes the too great laxity of the

the stomach, the great weakness of the body, and the depression of the spirits, require a remedy to brace, to strengthen, to exite, to exhilarate: wine is the most proper. In vain would you seek a more expeditious and agreeable medicine than this through the three kingdoms of nature: but let it be generous and smooth, and such as may vie with Falernian wine:

*Quod curas abigat, quod cum spe divite manet  
In venas, animumque meum, quod verba ministret.*

*My wines of generous and of smother kind,  
To drive a way my cares, and to the soul,  
Through the full veins, with golden hopes to roll,  
With flowing language to inspire my tongue,  
And make the list'ning fair one think me young.*

FRANCIS'S Hor. lib. 1. ep. 15.

But avoid those small wines which have less of the nature of wine than vinegar, and rather irritate than strengthen. Remember that wine is an antidote against the miseries of life and the tediousness of idleness; cares are banished by wine, whilst the reason is intoxicated: but does such a drink become the learned? And this puts me in mind of another sort of intoxication, I mean that caused by smoking tobacco, which abounds with an acrimonious salt and sulphur, together with a narcotic oil. I have elsewhere enlarged upon the folly of smoking; here I shall add more concisely, that the narcotic principle hurts the stomach, causes a stuffing up of the head, head-achs, vertigos, anxiety, lethargy, apoplexy, and finally all the effects of opium, as the great Lord BACON has observed, *Tobacco*, says he, *the use of which herb has greatly prevailed in the present age is a species of henbane: it is evident that it disturbs the head like opiates.* Therefore, young men, avoid a dirty pleasure, equally injurious both to your health and your studies, and which should be left to those who have recourse to it for the killing of time. The muses

fly those studies that smell like a stable, and delight in a purer air; for one of the chief sources of health or sickness is the air which environs us, in which we live, and by which not only our bodies are affected, but whose power our very minds experience. Thus the air of Bœotia, or Thrace, rendered dull those whom that of Athens revived:

*Bœotum in crasso jurares aëre natum (y).*

*Take him to books and poetry, you'll swear  
This king was born in thick Bœotian air.*

FRANCIS'S HOR. lib. 2. ep. 1.

Prudent men will chuse as pure, as warm, and as dry an air as they can; for such an one, by giving strength to the fibres, is salubrious to the lungs, and promotes the circulation. A frigid and dry air is supportable; a moist air is highly pernicious, as by it all the disorders of studious men are aggravated; for it increases laxity, stops perspiration, and occasions catarrhs, pains, and pallsies. Every man of learning has it not in his power to repair to Baya or Alexandria, nor does it suit them all to breathe the country air, which is the purest; for there are more that compile than think. The country is not a proper place to pursue such studies; but any man may chuse a healthy habitation in town, and live in a lightsome house, a high apartment, refreshed by a breeze in summer, and enlightened by the sun in winter. He should take particular care to have fresh air let into his chamber every day; without this precaution he lives upon the infected: it should be cooled in summer, and not kept too warm in winter; for the learned, like all weak men, as was the case of AUGUSTUS, are ill able to bear excess  
of

(y) The goddess, says Plato, chose a place which was to give birth to the wisest men. *Init. Timæi.* And do not forget this with regard to places, that they are of great consequence in giving birth to men of superior genius, or the reverse. *De leg. lib. 5.*



of heat or cold : too great a heat relaxes the nerves, but intense cold causes convulsions. In the dog-days we become unfit for labour, as also in the severe cold of winter ; and the more tender the constitution, the less it is able to withstand the weather. Such was that of MILTON, whose nerves were relaxed to such a degree in the heat of summer, that he (z) was almost reduced to a state of imbecility. But the air should be warmed in winter, a fire being kindled for the purpose ; for this fresh air succeeds the corrupt air that goes off ; nor do exhalations remain, nor does the head grow warm, nor do the feet become cold, which is of great consequence. Cold in the feet hurts the weak by causing pains in the head, the throat, and the breast, it disorders digestion, causes dreadful colicks, obstructs perspiration, and prevents sleep to a very great degree. I have often cured men of note, who had long been without sleep, tho' they had recourse to the most efficacious remedies, by advising them to warm the soles of their feet at a fire, every night before they went to bed, till the sense of heat became painful. Others have been greatly relieved by a gently stimulating plaster applied to the soles of their feet, and left on both night and day.

I may probably, respectable auditors, appear to descend too much to particulars, and to dwell too long upon trifles ; but nothing is little or inconsiderable in physic ; and it is a thing of so much importance to keep the blood from the heads of men of learning, that they should neglect nothing which may contribute to this end. They should therefore take care not to keep it warm with too much covering, or rather they should use themselves to go bare-headed from their childhood. Some men of learning have been so bold as to wrap their heads with a towel dipt in cold water, that they might be able to continue the longer at their studies : and what will not an inordinate desire of knowledge excite

(z) By the excessive heat, which is not so much allayed by an Etesian gale, I have entirely lost the power of philosophising, and am deterred from writing. LANCIANI ad COCCHI, p. 47.

cite men to? Such rashness should be avoided; but it is of service to all, and especially to studious, sedentary men, to wash their ears, their faces, and their whole heads, hair and all, every morning in cold water. It is very good for the *literati*, when they feel the blood forced up to into their heads, not to walk, or inquire solicitously after medicines, but to sit upon their chair in total inaction, without ever uttering a word.

The same necessity of keeping the blood from the head should prevent the learned from indulging in sleep after dinner; or, if they should sometimes be forced to yield to sleep, let them imitate the illustrious personage, so often mentioned already, AUGUSTUS CÆSAR, *who with the cloaths and shoes he had on took a short nap, having covered his eyes with his hand* (a) I must likewise add this caution, that they should never compose themselves to sleep, without first unbinding all their ligatures. To wash their feet in warm water is likewise of great service to them.

These are the chief helps by the assistance of which the learned will be enabled to prevent the ill effects of study; but when their application has produced real disorders, they will have occasion for other remedies. You will sometimes see them, when nature is quite exhausted by study, fall into a consumption; then the severity of the disorder requires some efficacious remedy; and the best is entirely to lay aside study, meditation, and books, to bid a long farewell to their musæums, and, giving themselves up to leisure, cheerfulness, and country pleasures, to think of restoring their bodies alone, without troubling their heads about cultivating their minds; but let them become what men were designed for by nature, ploughmen or gardeners.

*Difficile*

(a) Qui ita ut vestitus calceatusque erat, reiectis pedibus, paullisper conquiescebat opposita ad oculos manu. SÆTONTIUS in vit. C. O. Ang. cap. 82. I enlarged upon the ill consequences of sleeping after dinner, in an epistle which I inscribed a few year ago to the illustrious HALLER.

*Difficile est longum subito deponere amorem,  
Difficile est: verum hoc, si lubet, efficias.  
Una salus hæc est, hoc est tibi pervincendum.*

CATULL. 82.

*It is a difficult matter to divest one's self suddenly of a passion of a long standing: but this you may effect, if you desire it. This is the only thing that can preserve you; this you must endeavour to bring about at any rate.*

How sure should we be of curing the disorders of men of learning, if it were possible to lull thought asleep. Here generous wines are of great service, provided the lungs are still unaffected, and a slow heat does not burn up the veins. Wholesome meats, and well boiled aliments are of great service: milk is likewise of great service, provided the stomach is able to bear it. Riding is also useful. And it may be beneficial to purge away the peccant matter by some gentle, strengthening remedy. BACON recommends rhubarb. CELSUS, with more reason as I apprehend, recommends aloes, the use of which is of great service to the learned. Let them not, however, abuse an excellent remedy; for, though purges are sometimes necessary, they are dangerous when too frequently used: for the body begins to be disused to nourishment, and must of consequence grow weak. But beware, you sick men, of too violent purging remedies; because, as the intestines are often covered with mucus, this mucus is generally soft, and easily removed; when it is removed, a softer sort succeeds in its place; this badly defends the villous coat of the intestines; and, when it is left without defence, it either occasions incessant pains, or should be continually fomented by the tenderest sort of food.

The Peruvian bark or kinkina is here of the greatest efficacy imaginable; in this case there is not a better remedy; it restores digestion, strengthens the vessels, compresses the fluids, promotes secretions, and, above all,



all, perspiration, repairs the strength of the nerves, and quells false motions. One of our most eminent geometers soon repaired his wasted powers by a large draught of the decoction of kinkina, which he had constantly by his side.

If the constitution be not yet entirely broke, weakness oppresses the stomach and the nerves, the learned are troubled with hysteric symptoms, often attended with a vertigo, fainting fits, suffocation, and anxiety. They are to be cured like women who are troubled with hysterics, occasioned by mobility and want of tone in the fibres; they are to be cured, I say, by bitters, ferulaceous gums, myrrh, steel, and the cold bath. The frequent use of the latter preserves a good state of health, and repairs a broken constitution; for it is efficacious above all other remedies, except there be already an extraordinary degree of weakness, in strengthening the stomach, the nerves, and the whole body; it restores sleep, produces a cheerfulness and serenity of mind, and supplies new strength to pursue new studies. This made the ancients set so high a value upon it, that, even amidst the avocations of their necessary business, they never failed to bathe every day: and I most earnestly recommend to the literati the frequent use of bathing. I am not ignorant that the ancients often used the warm bath, but they used it as a remedy after exercise or fatigue; and it generally agrees very well with the robust and active; but they restored their strength with cold baths. AUGUSTUS, who received no benefit from the warm bath, when affected with great weakness of body, was advised to have recourse to the cold bath by ANTONIUS MUSA. Cold baths are salutary to delicate constitutions, and the health of the learned is generally, though not always, as much hurt by bathing in warm water, as promoted by bathing in cold.

Friction in a great measure produces the same effects with bathing; for if the whole lower belly of a person, whilst he lies supine in bed in the morning, with bent knees and an empty stomach, be rubbed all over with  
a rough

a rough cloth, he will be greatly benefited by it, by this artifice the motion in the abdomen is increased, the stagnant juices are thrown out the secretions are increased, the excrements are prevented from staying too long in the body, and innumerable diseases are cured, which, as you have been frequently told, are caused by a slow circulation. If the skin is rubbed all over, either with a cloth or a flesh-brush, the cuticular secretion is greatly promoted, the circulation of the blood is so quickened, that a violent fever may be caused by rubbing alone, the motion is increased in the smallest vessels, the strength is repaired, and the ills caused by want of exercise are partly remedied. The ancients were therefore right in setting a great value upon friction : it was afterwards unhappily neglected ; but the English physicians revived it with great success ; and there is no class of men to whom it may be of greater service than to the studious. I would, however, recommend to them not to use this kind of exercise till they have read what CASSIUS and GALEN have written concerning it.

There is another sort of remedy, which is often of the highest service to men of learning, I mean chalybeate waters ; but they should not send for them, they should go where they are to be drank at the fountain head. I do not indeed despise those that are sent for ; nay, I have known men of learning who, by my advice, drank Seltzer waters at home, during the whole year, by which, and remitting somewhat of their application, they recovered their health. But it is still better to drink them at their source, for they are there in greater perfection ; and the journey is of service, because, whilst it lasts, the sick are exempt from all domestic cares, are amused with a variety of objects, enjoy agreeable company, relax their minds, and recreate their bodies ; and the journey alone is of so much service, that hypochondriac persons are often cured by visiting remote libraries.

It would be as useless as it is impossible to enumerate all the waters that may be of service in repairing broken constitution.

constitutions ; for what nature intended as a most salutary remedy, it has liberally bestowed upon most regions. There are many in Switzerland ; those of Aquia in Savoy, in my neighbourhood, deserve high praises ; our waters of Rotula are still more to be recommended on account of the agreeableness of the place than their salubrious qualities ; we must not forget those of Lausanne, the virtues of which have been demonstrated to me both by analysis and frequent observation ; but the Seltzer waters surpass them all, at least in their reputation, if not in their qualities ; those of Schwalbach and Spaw are still more powerful ; and the Pymont waters are inferior to none.

These are not all, but the principal remedies by which those disorders may be cured which men of learning bring upon themselves by over great application : but their disorders are not occasioned by study alone : as men they are subject to all the disorders of men ; and then they should be treated according to the rules laid down by experience for curing each disorder. Physicians however, should never forget, that the patient, whom they have under their care, is a man of learning, and cannot, of consequence, have the same strength with which most other men are endued : as they have relaxed fibres and thin blood, they are not so capable of bearing phlebotomy : but the intestines are often filled with a collection of filth, which must be purged off ; so that, as the illustrious RAMAZZINI has long since observed, it is better to have recourse to other evacuations with them than to bleeding.

Care should be always taken of the head of a learned patient, because it is easily disturbed, and grows delirious. This is of very bad consequence in disorders ; for peevishness increases, which few learned patients are without ; and, whilst the brain is agitated by a delirium, the necessary action of the nerves upon the body becomes slow, and so the powers of nature, which can alone effect a cure, are destroyed.



If the patient was afflicted before with nervous disorders, these soon cause sufferings of a peculiar sort: the learned, when they are ill, cannot bear too much light, nor noise, nor a crowd of spectators. I have often seen, upon the fever's beginning to cease, new symptoms occur, which appear to be very bad, but are in fact only nervous.

Men of learning cannot well bear strong and powerful remedies.

Their recovery is always tedious, and it requires extraordinary care; the strength returns slowly; the faculties of the mind, above all, are long in a wavering condition; and I have scarce ever known a man of learning recover out of a disorder, without complaining of his memory's being impaired, and a sort of weakness of the head discoverable in the face itself. Those little consult their own interest, who immediately return to their studies, and that before their strength is renewed: they prepare to themselves a sore repentance: the ill consequences are felt by their heads, their eyes, and their stomachs, which must greatly suffer, if, whilst they stand in need of the assistance of the nerves, to digest the remedies they take, the mind should at so improper a time make use of them. I have often found, that the exercises of the mind so weaken the sensibility and motion of the stomach and intestines, that the power of purgatives is entirely counteracted by meditation and constant study.

Learned patients, when just out of a disorder, recover their sleep very slowly, and it often is not to be recovered without the assistance of wine, which is of wonderful efficacy in this case, by restoring a due tone to the stomach, debilitated by warm liquors; firmness to the nerves, strength to the whole body and spirits to the dejected mind.

Thus have I laid open the causes of disorders, their symptoms, and the method of avoiding them: in fine, I have compleated my design to the best of my power; and you with joy perceive my discourse approaching to a conclusion,

conclusion, respectable auditors. I am aware, however, that you will not dismiss me, till I have atoned for a grievous omission; nor do I intend to disappoint your expectation: I shall therefore now discover the grand arcanum of the art of preserving health, which I have hitherto concealed: attend to my words. Cheerfulness of temper is the source of health, and a virtuous life is the source of cheerfulness: a good conscience, a mind pure and clear of all contagion, are the best preservatives of health; and if the learned were without them, it would be a shame: for of what use is learning without wisdom?

*Quid musæ sine moribus  
Vanæ proficiant*

*Of what service are the muses without the aid of virtue?*

What else is knowledge but to be wise? Were not the learned in former ages wise? Knowledge alone is of no avail. I have no manner of esteem for those doctors, who inquire what is virtuous and becoming, entirely taken up with mortal contemplations, and who, though they see good, follow evil courses. Woe be them! they will suffer severely for their bad conduct. Consider the force of the passions: those which affect the mind agreeably, promote a good state of health; which those of a contrary nature destroy. But what affects the mind more agreeably than the remembrance of a life well spent.

*Omnes crede diem diluxisse supremum.*

*Look upon every day that's past, as the last of your life.*

Cruel remorse of conscience, on the other hand, destroys the powers both of mind and body; because the mind being a prey to grief, such is the will of the Author of nature, the fibres are relaxed, and both health and beauty vanish. I cannot without horror recollect the shocking inquietudes of some men, who having abused the gifts of God, could not, without

out inexpressible terror, see death approach, which renders the deity more awful. On the other hand, I cannot without joy revolve in my memory the happy deaths of some good men, who, as they had passed their whole lives in the practice of virtue, returned with joy to the Fountain of all good, having laid aside their terrestrial covering, and crowned a happy life with a joyful death. How properly does the learned doctor, lately professor of divinity in this academy, occur to me in this place, who, after having suffered the cruel torments of a dreadful disease, during the course of a twelve-month, with wonderful resolution and patience, after a few friendly and pious conversations with his wife and children, whilst he testified his gratitude to me for my care, and expressed his good wishes, expired with religious composure. And why should I forget you, learned, dear, and now happy uncle and Mentor, who, having lived your whole life, whilst in health, as we promise to live when we are ill, enjoying, to an advanced age, a conscience, void of offence, a genius replete with vigour, and faculties acute and penetrating, not only taught us how to live virtuously, but likewise have instructed us how to die well.

But it is time for me to put an end to my wandering discourse; for I am ashamed to detain you any longer, respectable auditors.

Farewel, therefore, most illustrious persident, whose extraordinary humanity, gentle manners, and uncorrupt integrity, all are unanimous in praising. How agreeable to me was it to be chosen upon this occasion by you, whose friendship, having so often experienced, I am so happy as to experience again. But how can I address you, without at the same time thinking of that prince, whom you represent amongst us with so much applause, and this remembrance fills me with emotion. For he is the prince to whom I am indebted for so many favours. It is he who recalled me, out of love to my country, when I was on the point of quitting it at the invitation of a great monarch; recalled me, I say; and, remem-



bering my attachment to physic, founded this professorship, and bestowed it upon me, not without the most honourable tokens of his benevolence; and, by enrolling me in your illustrious assembly, learned professors, he enabled me to address you by the dear appellation of colleagues. Vouchsafe, therefore, favourably to receive him, whom he has given you as a companion of your labours, and receive me, most honoured colleagues, in the same disposition of mind with which I come towards you; and shew as much benevolence, facility, and readiness to assist me, as I am ready to shew you veneration, obsequiousness, and docility.

Citizens and strangers, illustrious for your great virtues, your extraordinary intellectual endowments, and the high offices you fill, the friendship of many of whom I cultivate with pleasure, receive my thanks for the benevolence with which you have heard me. Finally, I address myself to you, you studious youth, hope of your country and of the church, and ornament of the academy; whatever learning or genius I am possessed of,

*Et quicquid in arte mea possum promittere curæ,*

*And whatever assistance I can promise by my art;*

which I am sensible is but small, and I am sorry for it; but, such as it is, I entirely dedicate and consecrate it to you. It will give me the highest satisfaction, if it can be of any service to you; but how would it grieve me, if, by misunderstanding my discourse, you should be hurt instead of being benefited by it. Take care, therefore, virtuous youths; my design was to shew the dangers of an obstinate perseverance in study; but I was quite silent with regard to the use of polite learning, *which (b) nourishes youth, delights old age, adorns prosperity, affords consolation in adversity, delights at home,*

*is*

(b) Adolſcentiam alunt, ſenectutem oblectant, ſecundas res ornant, adverſis ſolatium prebent, delectant domi, non impediunt foris, pernoctant nobiſcum, peregrinantur, ruſticantur. CICERO Oratione pro Archiâ,

is no hindrance abroad, passes the night with us, travels with us, accompanies us into the country. I have proved by examples, how dangerous it is to fatigue the minds of children with too great labour; but it was not my intention to banish all labour and study. " Nam certe  
 " quamlibet parum sit, quod contulerit ætas prior, majora tamen aliqua discet puer eo ipso anno, quo minor didicisset. Hoc per singulos annos prorogatum  
 " in summam proficit: & quantum in infantia præsumptum est temporis, adolescentiæ acquiritur (c).  
 " For though what is contributed by the first age of life is but inconsiderable, a boy will certainly learn  
 " some things of consequence in the very year that he learns trifles. This, increasing every year, will at  
 " last improve him, and what is learned in infancy is an acquisition to youth." It is dangerous to break upon the rocks of too great learning; it is shameful to be wrecked upon the opposite shore. What path then must you tread? *Hac urget lupus, hac canis angit.* On one side the wolf urges, on t' other the dog worries us. You will be safe in the middle path, always remembering that sentence of your favourite HORACE:

*Est modus in rebus sunt certi denique fines,  
 Quos ultra citraque nequit consistere rectum.*

*Some certain mean in all things may be found,  
 To mark our virtue, and our vices bound.*

FRANCIS'S Horace, lib. I. sat. I.

(c) QUINTILIANUS de Instit. Orator. lib. I. c. 1.

F I N I S.





